Railway Age
JULY 21, 1945
Founded in 1856

THE LIBRARY OF CONGRESS

BYERS WROUGHT IRON

helps the Water Scoop celebrate its 75th Anniversary

The New York Central Railroad celebrates an important 75th anniversary this year. It was just three quarters of a century ago that the first water scoop installation was made—an important step in speeding up train schedules.

The Central is celebrating this birthday by installing new systems which will take on water at speeds up to 80 m.p.h. The track pans—19-inches wide, 8-inches deep, and from 1400 to 2500 feet long—are fabricated with Byers Wrought Iron bottoms to extend service life and minimize maintenance.

Byers Wrought Iron is also used to help solve one of the greatest problems in taking on water at high speeds. In the first experiments, water force and velocity were so great that they forced the lock of the cistern cover, and the overflow sometimes broke windows in passing trains. The engineers then developed an improved scoop from which the water is carried upward and backward through an intake conduit which gradually increases in area and then reverses the direction of the flow so that the water is directed against a v-shaped divider on the under side of the coal slope sheet. To relieve the high pressure produced by the rapid inflow of water, seven wrought iron vent pipes, each 6 inches in diameter, are located on each side of the tender. Five are carried through return bends above the top of the tank, back through the water space, and then down to outlets through the water-bottom; one of these is shown in the illustration. The vents are fabricated of Byers Wrought Iron

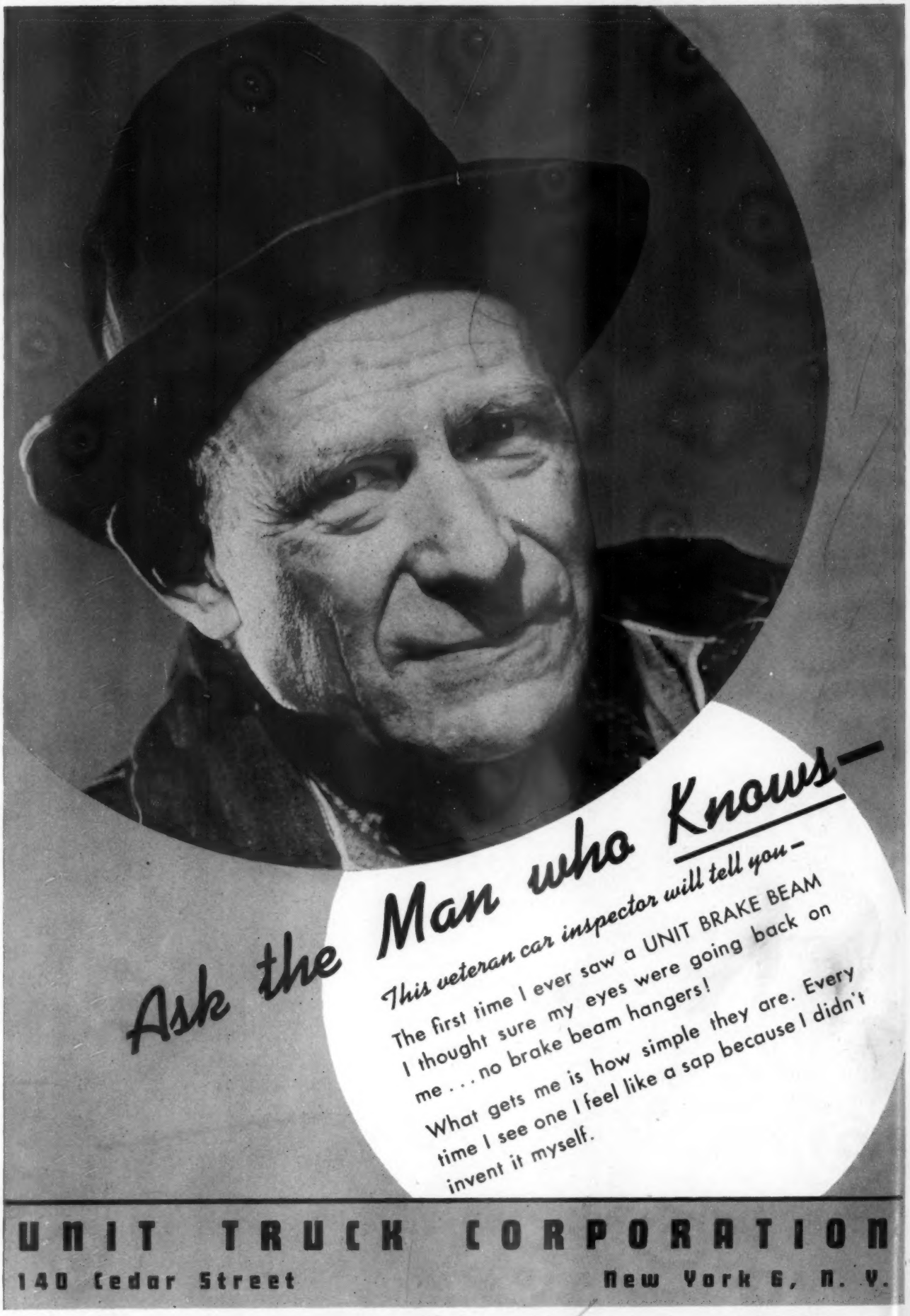
Byers Wrought Iron offers a number of advantages for jobs like this . . . corrosion resistance, ability to withstand vibration and shock, and excellent fabricating properties. The service qualities come directly from wrought iron's unique two-component nature. Tiny fibers of glass-like silicate slag, threaded through the high-purity iron body, give a structure something like a stranded wire cable, which withstands conditions that would cause speedy fatigue-failure of ordinary materials. These fibers also help to halt and diffuse corrosive attack, and to anchor the initial protective film that shields the underlying metal.

Our General Catalog gives full dimensional data on Byers products. Ask for a copy.

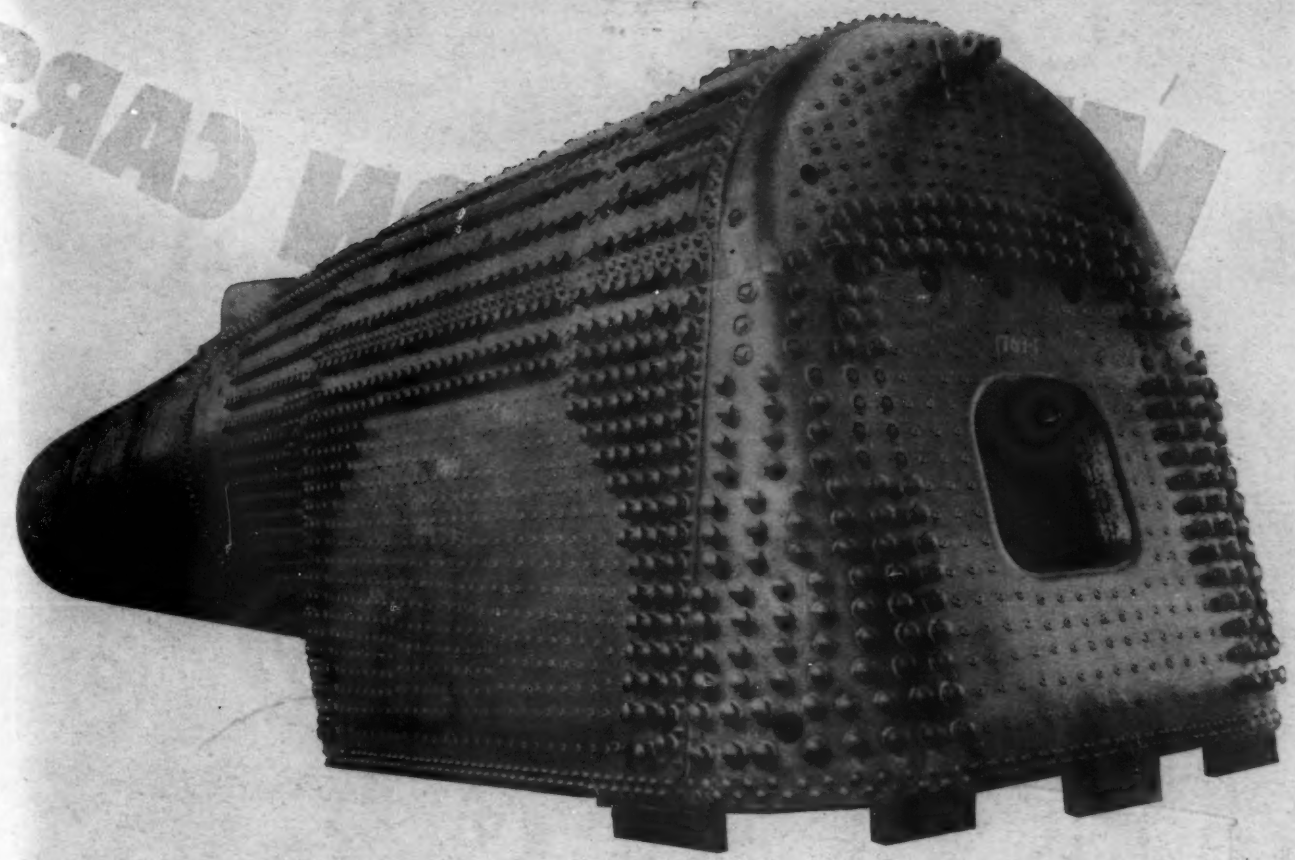
A. M. Byers Co., Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco.

BYERS
GENUINE WROUGHT IRON
TUBULAR AND HOT ROLLED PRODUCTS
ELECTRIC FURNACE ALLOY STEELS · OPEN HEARTH ALLOY STEELS
CARBON STEEL TUBULAR PRODUCTS

CORROSION COSTS YOU MORE THAN WROUGHT IRON


Ask the Man who Knows—
This veteran car inspector will tell you—
The first time I ever saw a UNIT BRAKE BEAM I thought sure my eyes were going back on me . . . no brake beam hangers!
What gets me is how simple they are. Every time I see one I feel like a sap because I didn't invent it myself.
UNIT TRUCK CORPORATION
140 Cedar Street
New York 6, N. Y.

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 193[illegible] at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 119, No. 3.



These are times that call for Bethloc

Stepping up of war in the Pacific means continued capacity loads for rail carriers, and makes it more important than ever before to equip heavy-duty locomotives with Bethloc Firebox Plates.

Bethloc Plates are made from special, low-carbon steel—a strong, ductile steel which is highly-resistant to the thermal stresses caused by severe firing conditions. Because of their dense, uniform grain structure and general toughness, Bethloc Plates have stamina to resist the fatigue stresses set up by vibration and sudden variations in temperature. They are only slightly affected by aging, and more than meet railroad requirements for strength, elasticity and elongation.

Proof of the pudding is the fact that Bethloc Firebox Plates are daily proving their dependability and superiority in locomotives on more than forty leading railroads.

Bethloc BETHLEHEM STEEL

FIREBOX PLATES

MT. VERNON CARS

In Production Today—
for Tomorrow's Traffic

30-Ton, 34' 6" Single-Sheathed Boxcar Built for the United States Army

30-Ton, 19' 5¼" Caboose Built for the Terminal Railroad Association.

MT. VERNON CAR DIVISION:
Complete Line of Freight Cars

LOCOMOTIVE DIVISION:
Diesel, Diesel-Electric, Electric, Steam, and Fireless Steam Locomotives.

PROCESS EQUIPMENT DIVISION:
Complete Line of Chemical, Food, and Petroleum Refinery Equipment.

QUIMBY PUMP DIVISION:
Screw, Rotex, Centrifugal, Chemical Pumps.

STEEL CASTING & FORGING DIVISION:
Electric Furnace Alloy, Stainless, Heat-Treated and Pressure Steels Castings; Forgings in all sizes.

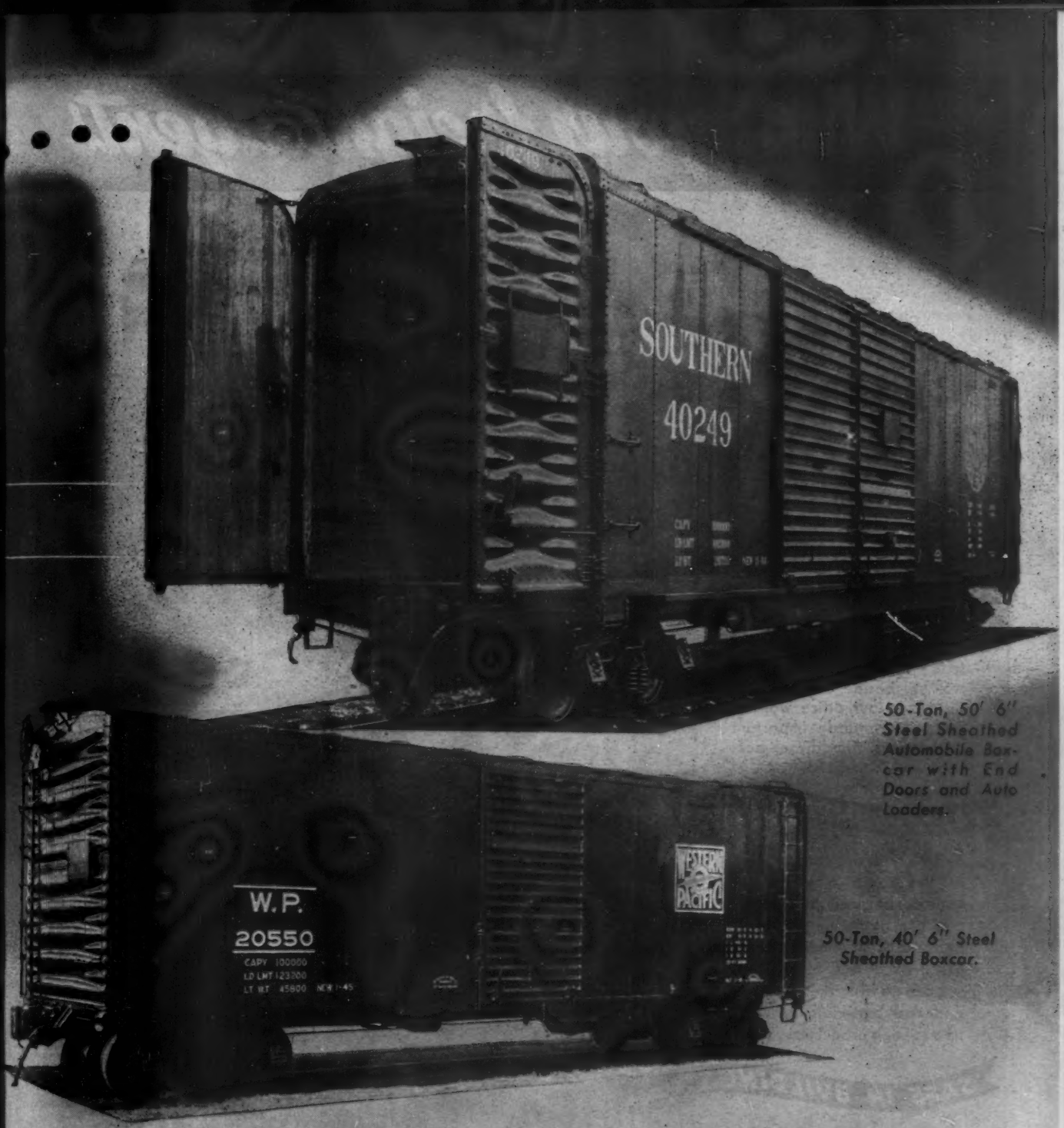
MT. VERNON

MT. VERNON,

Div. of **H. K. PORTER**

PITTSBURGH 22

Factories: Mt. Vernon, Ill. • Pittsburgh, Pa. • Blairsville, Pa



50-Ton, 50' 6" Steel Sheathed Automobile Boxcar with End Doors and Auto Loaders.

50-Ton, 40' 6" Steel Sheathed Boxcar.

BUILDING FOR PEACE AS WELL AS FOR WAR

Railroad freight cars are one item of war production that will be just as useful in peace as in war...Typical of the modern cars being produced at Mt. Vernon are the four pictured here.

CAR MFG. CO.

ILLINOIS

COMPANY, Inc.

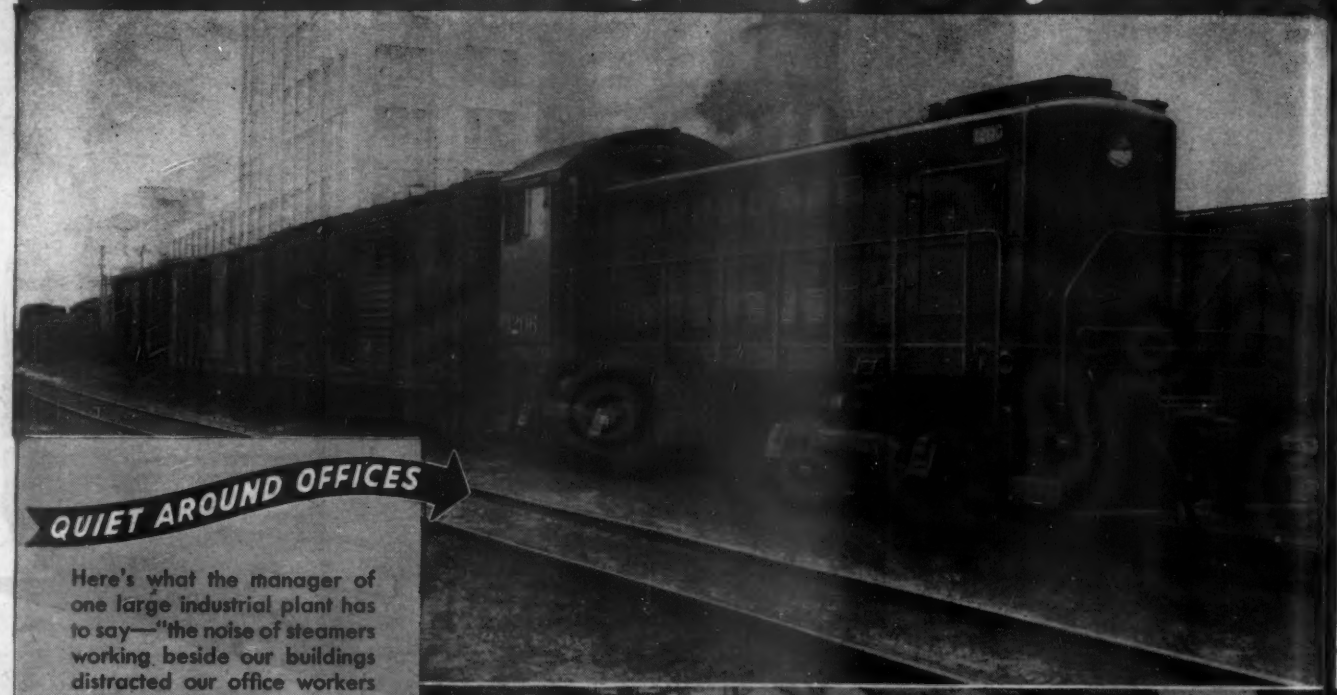
PENNSYLVANIA

McKeesport, Pa. • Newark, N.J. • New Brunswick, N.J.

MT. VERNON CARS

PORTER Better Built Equipment

What *your freight agents*



QUIET AROUND OFFICES

Here's what the manager of one large industrial plant has to say—"the noise of steamers working beside our buildings distracted our office workers and interrupted important conferences. The diesel-electrics work unnoticed."

FAST, PROMPT SERVICE

Switching service can be given at the exact time it's requested because diesel-electrics are available 90 to 95 per cent of the time. Shippers like it because finished products can go to market promptly and raw materials arrive in time to keep production rolling.

SAFE IN BUILDINGS

At new-type industrial plants where trackage runs through buildings, diesel-electrics present no fire hazard. They can enter buildings safely, pick up and drop cars at the exact points specified by the plant.

Alco

GE

AMERICAN LOCOMOTIVE

need to attract new revenue

ALCO-G.E. diesel-electrics combine revenue-attracting features with operating savings of as much as 38%

When your freight agents have the advantages of diesel-electric switching as a sales attraction, their opportunities for building new revenue and holding present revenue increase enormously. Diesel-electrics are clean, quiet, and safe; they are available at least 90 per cent of the time to meet the shipping and delivery schedules of industrial plants.

To make this revenue profitable and to obtain a high rate of return on their investment in diesel-electrics, the majority of railroads are choosing Alco-G.E. units. Their sturdy construction and experience-proved design insure maintenance and fuel economies, and a high degree of "use-ability." Alco-G.E. owners report:

"—our six-year-old Alco-G.E. locomotives are averaging 5.1 cents per locomotive-hour for maintenance."

"—enginehouse expense has been cut 30 per cent since our diesel-electrics replaced steamers."

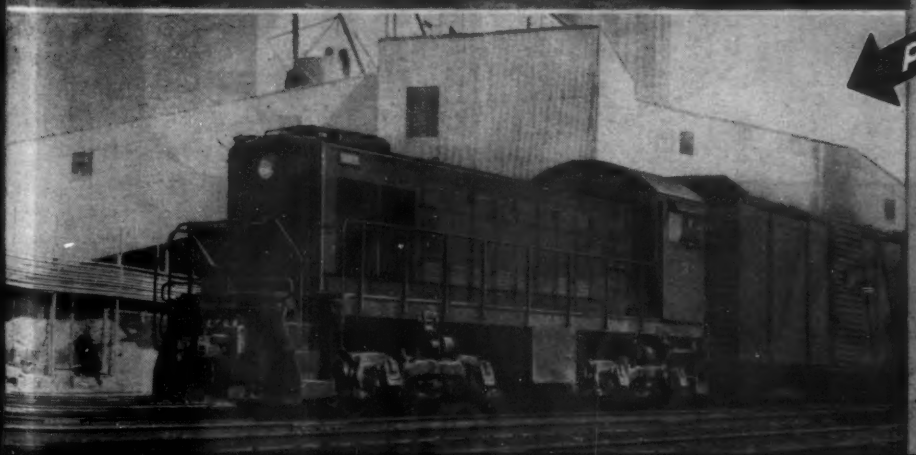
"—they are producing a 38 per-cent saving in operating costs through their low maintenance requirements and fuel economies."

"—their only out-of-service time has been eight hours a month for servicing and inspection."

This particular advantage of Alco-G.E. diesel-electrics —the ability to convert a larger share of gross revenue into net profit through operating economies—can go to work for you immediately. The services of our engineers are available for a motive-power survey, and their recommendations will be unbiased because we build all three types of motive power—diesel-electric, electric, and steam.

CAREFUL HANDLING

The electric drive of diesel-electrics insures a smooth gentle application of power that avoids sharp impacts when coupling and starting up. Thus, shock-damage to cars and lading is almost negligible.



PLANT CLEANLINESS

Shippers take pride in the appearance of their buildings, particularly when they are situated along railroad right-of-ways where they can be viewed by thousands of travelers. The absence of soot and cinders when diesel-electrics are used makes plant maintenance easier.

and GENERAL ELECTRIC

BUY WAR BONDS

"De Luxe" accommodations - Yesterday

Modernize with

POSTWAR PASSENGERS WILL PATRONIZE CARRIERS THAT OFFER THE MAXIMUM COMFORT, SERVICE, SPEED AND SAFETY.

Westinghouse

FOR OVER SIXTY YEARS THE BEST KNOWN NAME IN

UNINTERRUPTED *Conveniences* expected by Passengers . . . protected by Westinghouse

Modern Railroads depend on Westinghouse "De-ion" Nofuze Circuit Breakers

Tomorrow will see the most extensive passenger car modernization in railroad history. These modernization improvements represent large investments made for the sole purpose of gaining, and holding, patronage.

Temporary power failure in passenger cars, for any length of time, renders these conveniences useless . . . causes dissatisfaction, inconvenience, ill-will and possible loss of repeat revenue fare.

That is why modern railroads have *protected* their passenger car modernization investment by installing WESTINGHOUSE "De-ion" *fuseless* CIRCUIT BREAKERS. Designed to meet the most exacting requirements of railroad passenger car service, they have many advantages over conventional knife switches and fuses:

Westinghouse Special Features

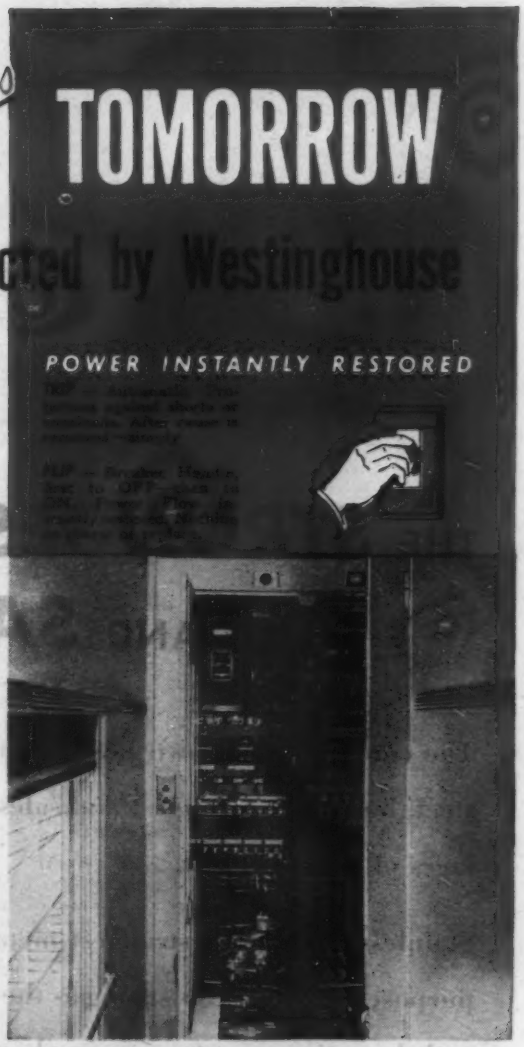
There are five frames, sizes ranging in ratings from 10 to 600 amperes, which include features such as . . .

- . . . . **Adjustable Magnetic Tripping provided on the F. & G. frame breakers.**
- . . . . **Thermal Action (E Frame).**
- . . . . **Thermal Magnetic Trip (F, G, K, L Frames).**
- . . . . **Quick-make and quick-break.**
- . . . . **"De-ion" Arc Quenchers.**

Nothing to replace . . . up to 40% less space in some types . . . instant power flow restoration . . . tamperproof . . . trip-free on overloads . . . low watt loss . . . combinations for 32 or 64 volt d-c and 115 volt a-c.

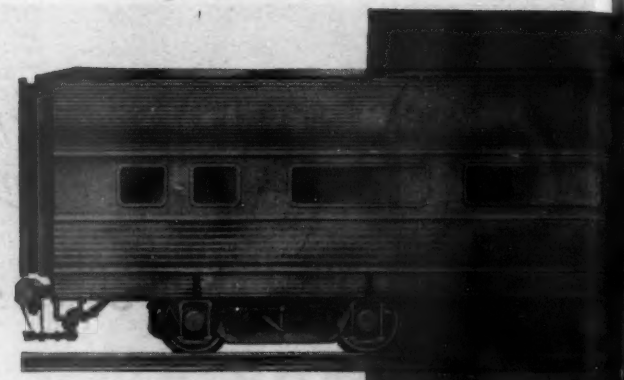
CONSULT WESTINGHOUSE—as a further service to passenger car builders Westinghouse is prepared to assemble special breakers for special requirements. Ask your Westinghouse office for a copy of "Development of Electrical Equipment for Standard Railroad Passenger Cars" or write: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-95103



PACKAGED PROTECTION—Enclosed in a locked cabinet, accessible only to authorized personnel, "De-ion" Circuit Breakers are usually located at the end of the car.

Railroad Electrical Equipment



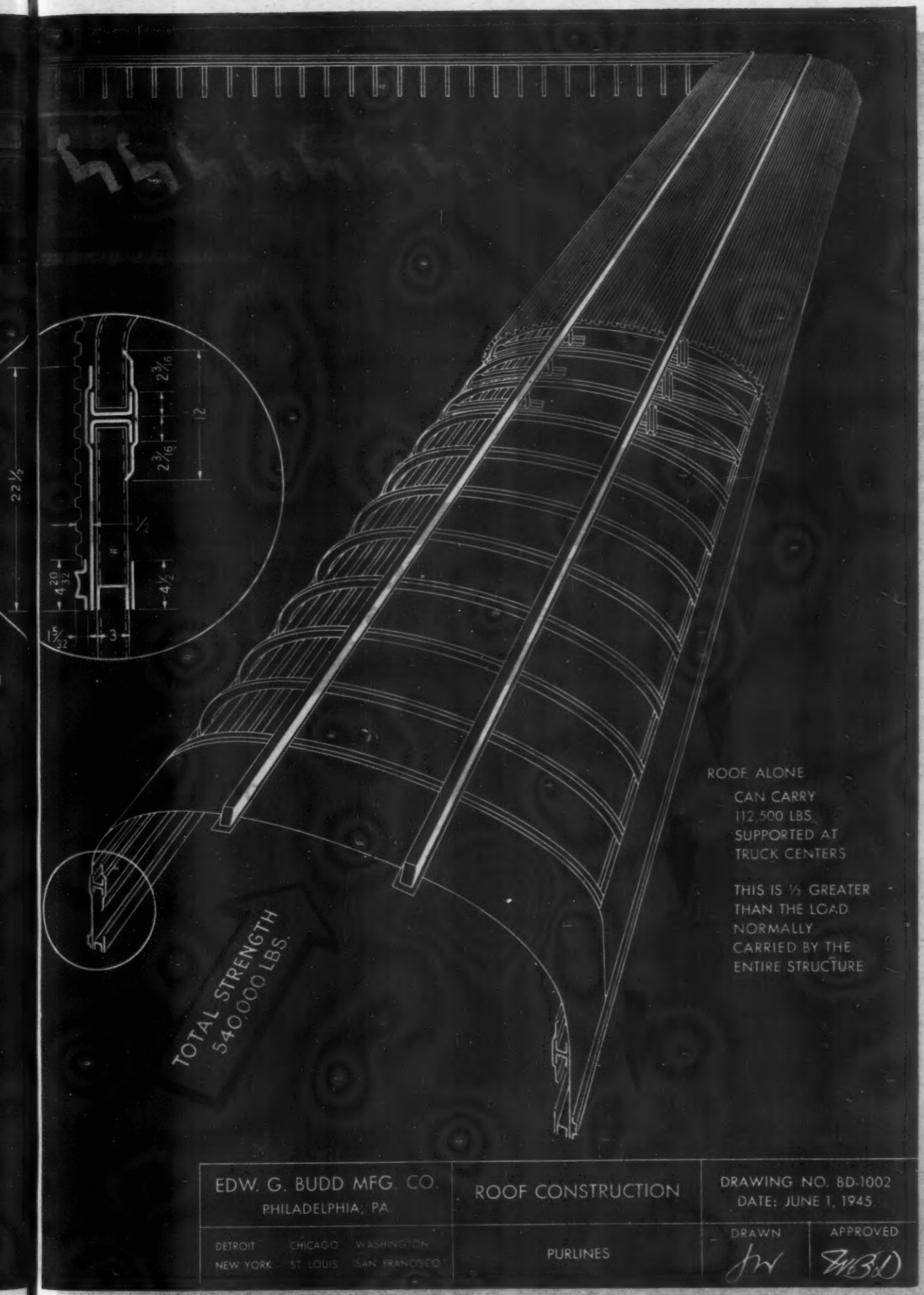
THE *STRONGEST* AND *SAFEST* CAR ROOF

The construction shown here illustrates how Budd, using stainless steel, builds the strongest and safest car roof without the disadvantages of excess weight.

Stainless steel is the strongest metal known suitable for structural purposes. It is twice as strong as the low alloy steels such as Cor-Ten, and three times as strong as carbon steel. By using advanced methods of forming and welding Budd is able to take full advantage of the basic high tensile strength of stainless steel. These same principles of design and construction are followed through the entire car.

Budd is helping the railroads meet their responsibility of maintaining highest standards of safety for the traveling public, while obtaining the economical advantage of light weight. Edward G. Budd Manufacturing Co., Philadelphia, Pa.

Budd



EDW. G. BUDD MFG. CO. PHILADELPHIA, PA.	ROOF CONSTRUCTION	DRAWING NO. BD-1002 DATE: JUNE 1, 1945
DETROIT CHICAGO WASHINGTON NEW YORK ST. LOUIS SAN FRANCISCO	PURLINES	DRAWN JW / APPROVED EWBD

SUPERIOR
Automatic
FLUE BLOWER

This easily installed equipment keeps flues and flue sheets clean with the result that steam power is maintained and locomotives operate more efficiently and more economically. Let us send you case histories.

SUPERIOR RAILWAY PRODUCTS CORP.
7501 Thomas Boulevard, Pittsburgh, Penna.

SUPERIOR
3-WAY
FLUE ROLLER

The 3-Way Flue Roller is exactly that. It expands, prossers and flares in one operation. Its use effects a saving of 80% in time and labor. The rolling action assures even expansion, a tight joint, correctly formed contours — and a better job. There is no distortion of flues, no fire cracking in the firebox end, no flying chips.

Available for prompt shipment.
Write for full information.

Speed of weighing was a "must" for the cars in this picture. But the day will come when economy of weighing will be far more important than speed.

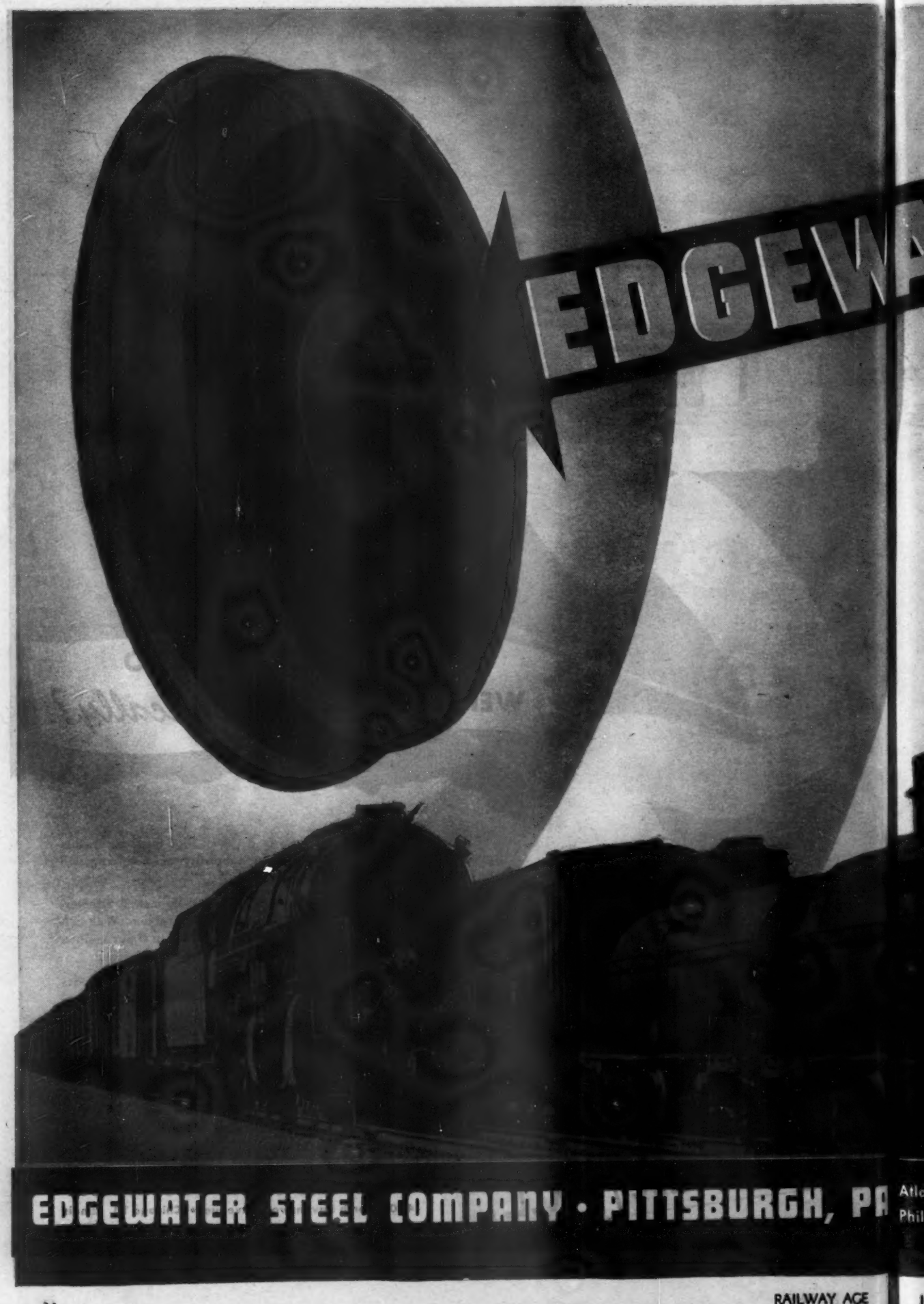
When either demand . . . or both . . . must be met, a Streeter-Amet Automatic Weight Recorder will solve the problem. With S-A equipment, cars roll over the scale at the rate of 4 or 5 per minute. Weights are automatically, accurately and legibly recorded.

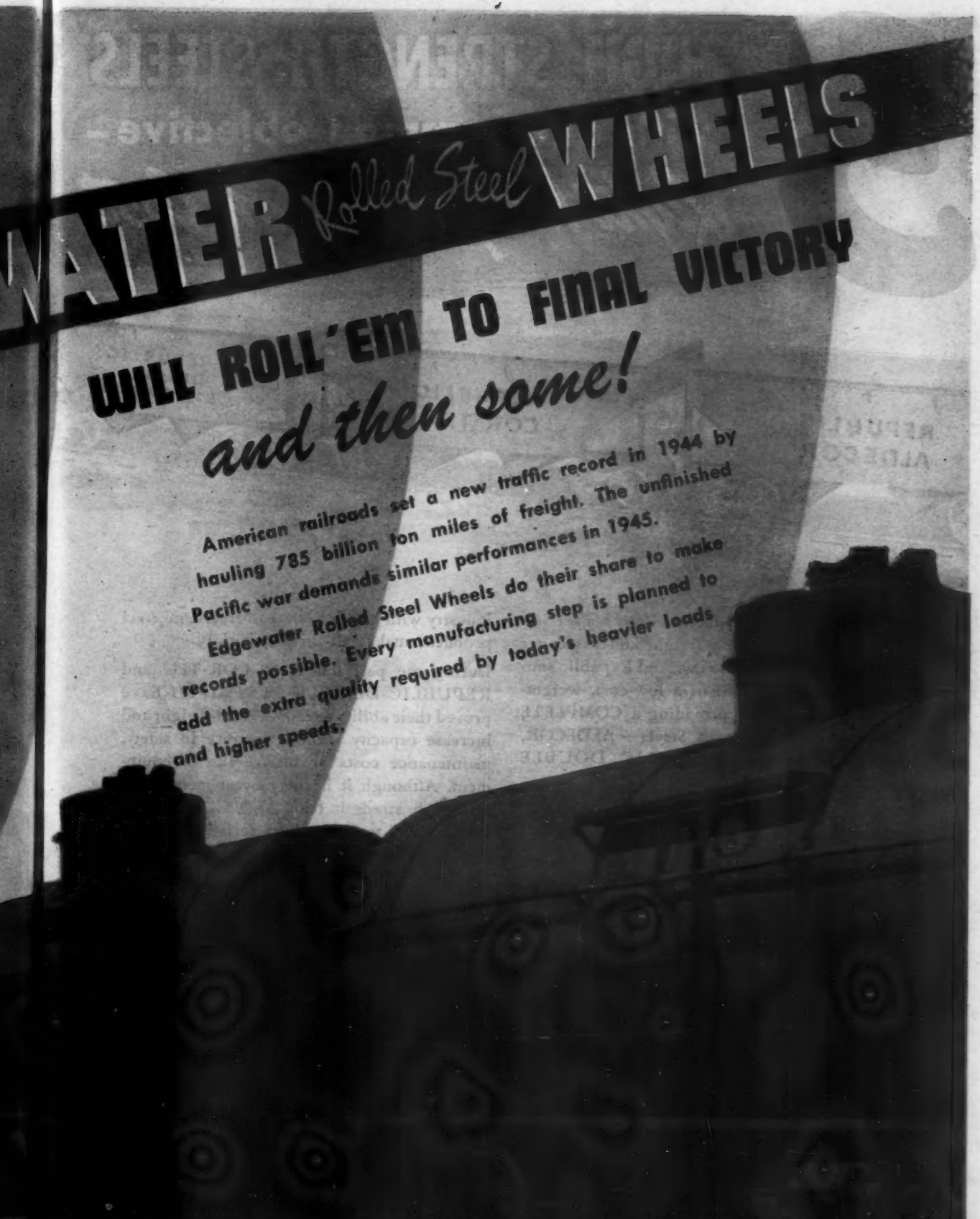
Carefully verified records show that a road putting 100 cars per day over the scale can save $23.00 per day or more than $8,000 per year . . . with a S-A recorder. A road weighing only 15 cars can save more than $700 per year.

Now is the time to plan for economy of future operations. Ask for a Streeter-Amet engineer to make a complimentary survey of your weighing problem and submit recommendations. Remember, an experienced field man supervises every S-A installation and keeps the machine in first class operating condition while in use.

STREETER-AMET COMPANY

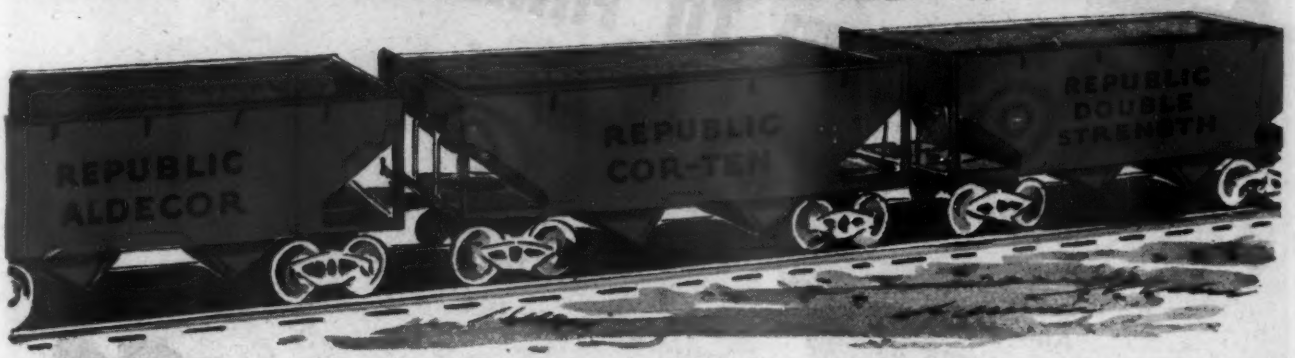
4109 North Ravenswood Avenue • Chicago 13, Illinois


EDGEWA
EDGEWATER STEEL COMPANY · PITTSBURGH, PA


WATER Rolled Steel WHEELS
WILL ROLL 'EM TO FINAL VICTORY
and then some!
American railroads set a new traffic record in 1944 by hauling 785 billion ton miles of freight. The unfinished Pacific war demands similar performances in 1945. Edgewater Rolled Steel Wheels do their share to make records possible. Every manufacturing step is planned to add the extra quality required by today's heavier loads and higher speeds.

Atlanta, Ga. Baltimore, Md. Boston, Mass. Chicago, Ill. Cleveland, O. Kansas City, Mo. Louisville, Ky. New York, N.Y. Philadelphia, Penna. St. Louis, Mo. St. Paul, Minn. San Francisco, Calif. Seattle, Wash. Washington, D. C.

3 HIGH STRENGTH STEELS with one common objective— *Light Weight at Low Cost*



Never has weight reduction been a more important factor in new freight and passenger car design than it is today. And Republic simplifies your selection of a low-cost, weight-saving material by providing a COMPLETE line of High Strength Steels — ALDECOR, COR-TEN and REPUBLIC DOUBLE STRENGTH.

In most respects, these three low-alloy steels have much in common. All three possess a minimum yield strength of 50,000 lbs. per square inch. They compare favorably in high resistance to atmospheric corrosion, and offer abrasion resistance equal to carbon steels of like physical properties.

Certain differences in chemistry and in fabricating qualities do exist, however, between these steels. For that reason, Republic, in accordance with its practice of providing industry with a broad range of steels and steel products, makes all three materials.

During the past ten years, COR-TEN and REPUBLIC DOUBLE STRENGTH have proved their ability to reduce dead-weight and increase capacity without sacrifice in safety, maintenance costs or service life of equipment. Although it is the newest member of this high strength trio, ALDECOR's ready forming and welding characteristics indicate that it may be favored for certain types of applications.

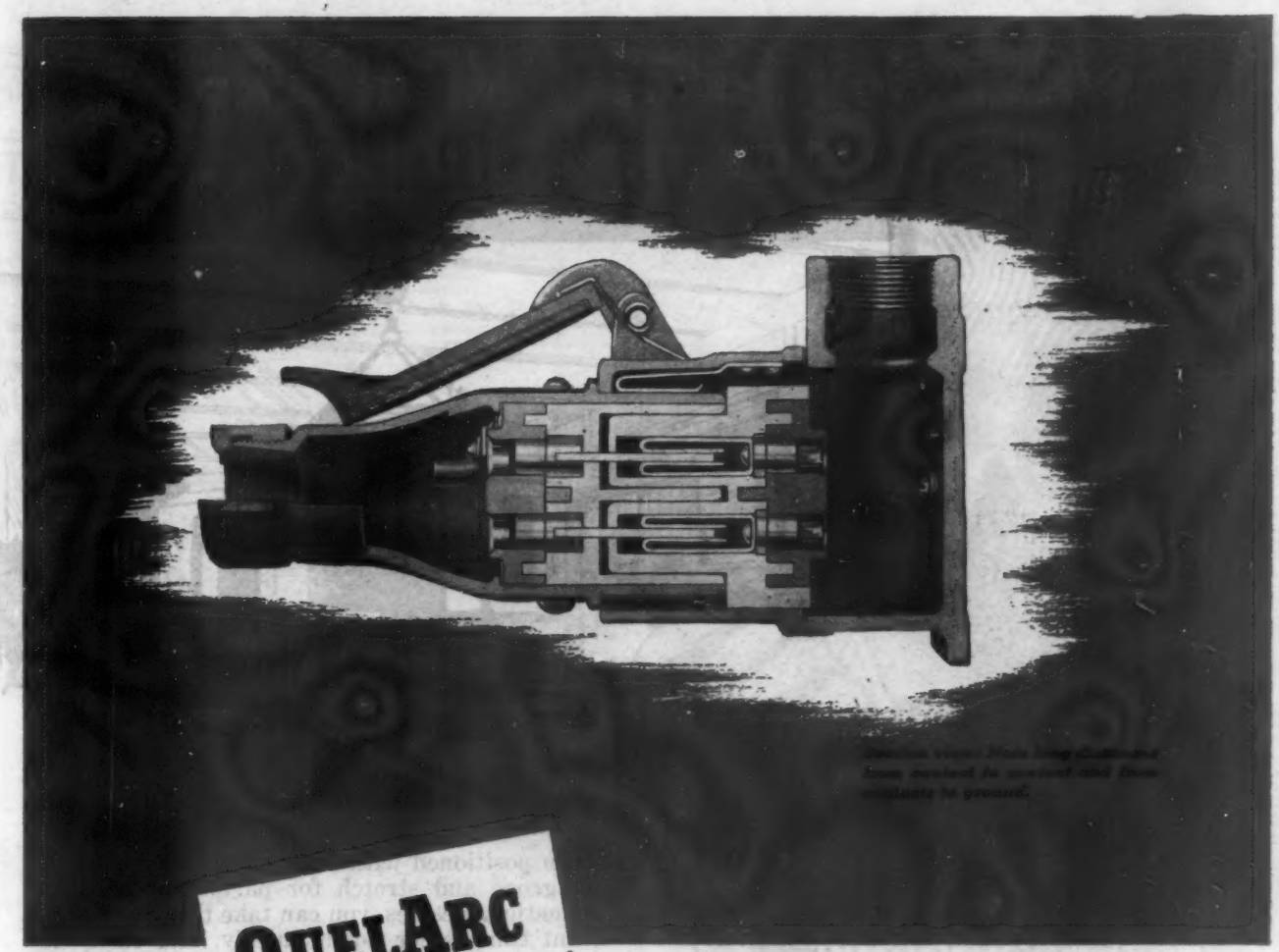
Republic metallurgists are ready NOW to work with you in selecting the material best suited to meet your own particular requirements. Write directly to:

REPUBLIC STEEL CORPORATION
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Building, New York 17, N. Y.

REPUBLIC STEEL
PRODUCTION FOR VICTORY

HIGH STRENGTH STEELS
ALDECOR • COR-TEN • DOUBLE STRENGTH

Other Republic Products Include Carbon, Alloy and St... Sheets — Plates — Pipe ... Bars, Rods and Rivets — Hardware, Spike Tubes



QUELARC

The circuit breaking plugs and receptacles . . . ratings up to 200 amperes

Pyle-National plugs and receptacles are built to stand up in railroad service, delivering dependable service with minimum maintenance. The exclusive QuelArc construction provides exceptional protection to contacts, for safe use as current rupturing devices. In the section view, note the complete enclosure of all contacts in insulating chambers which form an arc-trapping space. Note also the long distances from contact to contact and from contacts to ground. Contacts are individually renewable. Full ground protection is provided.

QuelArc plugs and receptacles are available in a complete range of styles, 2, 3, 4 wire types; ratings 20, 30, 60, 100, and 200 amperes. Many other types available for portable tools and control and instrument circuits. Write for general catalog 1100 with listings of all types.

THE PYLE-NATIONAL COMPANY
1334-58 North Kostner Avenue • Chicago 51, Illinois
Offices: New York, Baltimore, Pittsburgh, St. Louis, St. Paul, San Francisco
Export Department: International Railway Supply Co., New York
Canadian Agents: The Holden Co., Ltd., Montreal

PYLE-NATIONAL
RAILWAY ELECTRICAL EQUIPMENT
• SINCE 1897 •

HEADLIGHTS • TURBO-GENERATORS • CONDUIT FITTINGS • FLOODLIGHTS • MULTI-VENT

"WE'VE GOT TO GET 'EM IN AND OUT IN A HURRY"...

YOU CAN—count on New Air Conditioning Equipment That Saves wear and maintenance!

FOR EXAMPLE—the new Sturtevant Compressor-Condenser Unit is designed so that wear and tear due to frequent starting and stopping is minimized. The compressor operates continuously instead of cycling 10 or 12 times an hour — as with most existing systems. And variable output, the result of cutting in, and cutting out individual cylinders in conjunction with a divided evaporator, means more uniform temperature and humidity conditions in your car.

Valves, gauges, and all parts of this new Sturtevant Compressor-Condenser have been positioned within easy reach. No need to grope and stretch for parts that need attention. Besides, you can take this Sturtevant compressor down quickly, and easily put it together with ordinary tools. No extraordinary skill or special tools are needed.

MANY OTHER IMPROVEMENTS

Typical of the new Sturtevant Equipment that can be combined in a mechanical system are the Compressor-Condenser Unit, the Divided Evaporator, the Dry Surface Condenser, the Motor Compressor Unit and the Evaporative Condenser that uses spray water. So whether you are only interested in pressure ventilation or a complete air conditioning system — either ice activated or mechanical—it will pay you to see Sturtevant now. Talk with a Sturtevant Engineer and learn how this new Sturtevant Railroad Equipment can help boost profits and cut operating costs.

B. F. STURTEVANT COMPANY
HYDE PARK BOSTON 36, MASS.
Branch Offices in Principal Cities

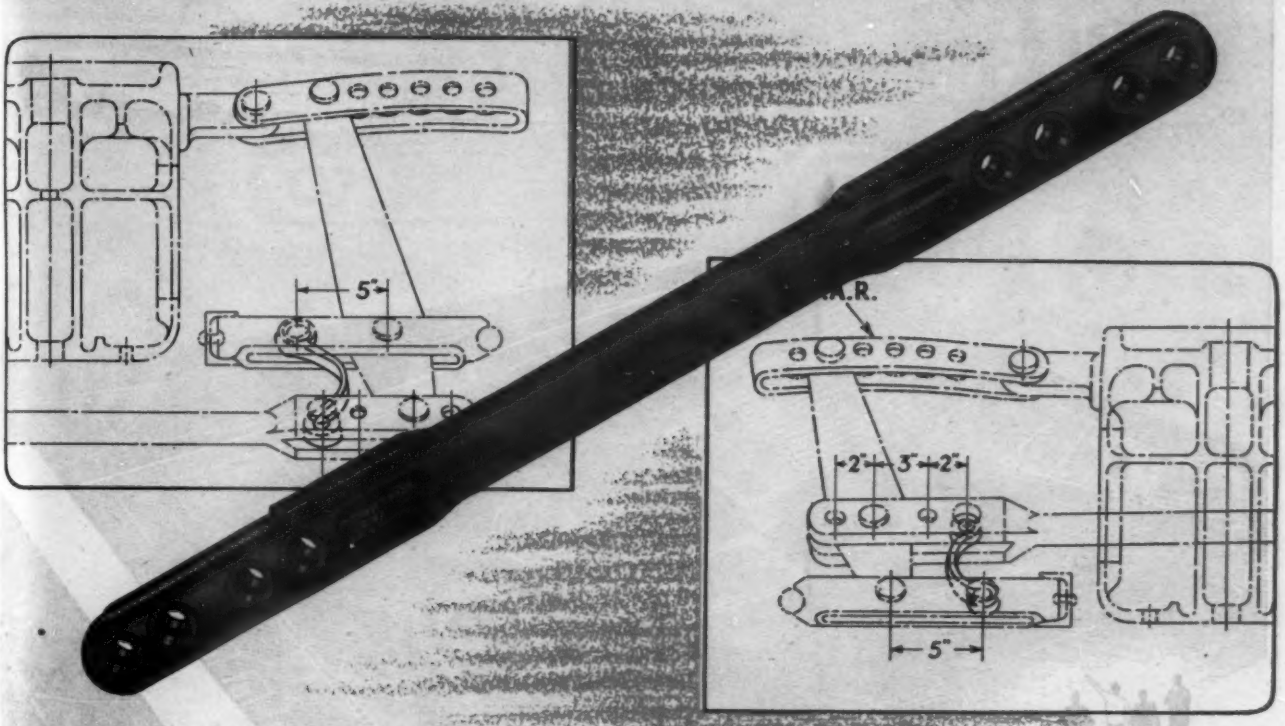
STURTEVANT GIVES YOU ALL 4 RAILROADING ADVANTAGES

1. More uniform temperature and humidity conditions in the car.
2. Equipment designed for easy maintenance.
3. Equipment designed for minimum space and weight.
4. Equipment that requires a minimum power load.

Sturtevant
Puts Air to Work

STURTEVANT "Railvane" Units or Systems are used by 40 railroads and are covered by more than 80 issued patents and patents pending

Schaefer Connections are Ideal for use with the BRAKE BEAM LEVELING LINKS



SCHAEFER ENGINEERING has developed a new type connection for use with National Malleable & Steel Castings Company's Brake Beam Leveling Links—either under or through the bolster as indicated by the sketches above.

This type of connection embodies the Schaefer "light weight-full strength-plus" hollow forged design—is properly proportioned for four holes—and carries the leveling link inside the overbuilt jaw structure.

You will find full engineering information and a more complete description in the new Schaefer Catalog. Write today for your copy.

Schaefer EQUIPMENT COMPANY

KOPPERS BUILDING • PITTSBURGH, PA.

LOOP, "U" AND STIRRUP TYPE BRAKE BEAM HANGERS . . . TRUCK, CYLINDER AND FLOATING LEVERS
TRUCK LEVER CONNECTIONS . . . BRAKE ROD JAWS . . . WEAR PLATES . . . BRAKE SHOE KEYS

WHEN YOU THINK OF STATIONS

. . . . . THINK OF PARCEL LOCKERS

ALWAYS,— in all ways the public you serve has the last word. When laying out floor plans for the concourse, waiting room and adjacent sections of a new station or terminal; or when considering the renovation or improvement of existing facilities,— remember that the public trend is definitely to self-service locker checking. . . . The benefits of American Locker Service go far beyond the immediate convenience, safety, speed and service afforded the traveler. Modern lockers, properly placed, divert traffic to separate lanes; eliminate concourse and waiting room congestion; help speed up the whole routine of handling passengers into and out of the station. And another benefit (not to mention increased income to the transportation company) is the public goodwill engendered. This goodwill is directly proportional to the scientific location of the lockers, the required number of lockers, and the volume of passenger traffic through the station. In other words, the last word from the public is: "Yes, we like them! Give us more!"

Write us for on-the-spot surveys plus recommendations for present and post war checking plans all without obligation.

AMERICAN LOCKER COMPANY, Inc.
211 CONGRESS ST., BOSTON 10, MASS.

BOSTON NEW YORK PHILADELPHIA PITTSBURGH
ATLANTA CLEVELAND CHICAGO DALLAS LOS ANGELES

★ ★ ★ ★ ★

PARCEL LOCKERS ARE AN INTEGRAL PART OF TOMORROW'S BLUEPRINTS

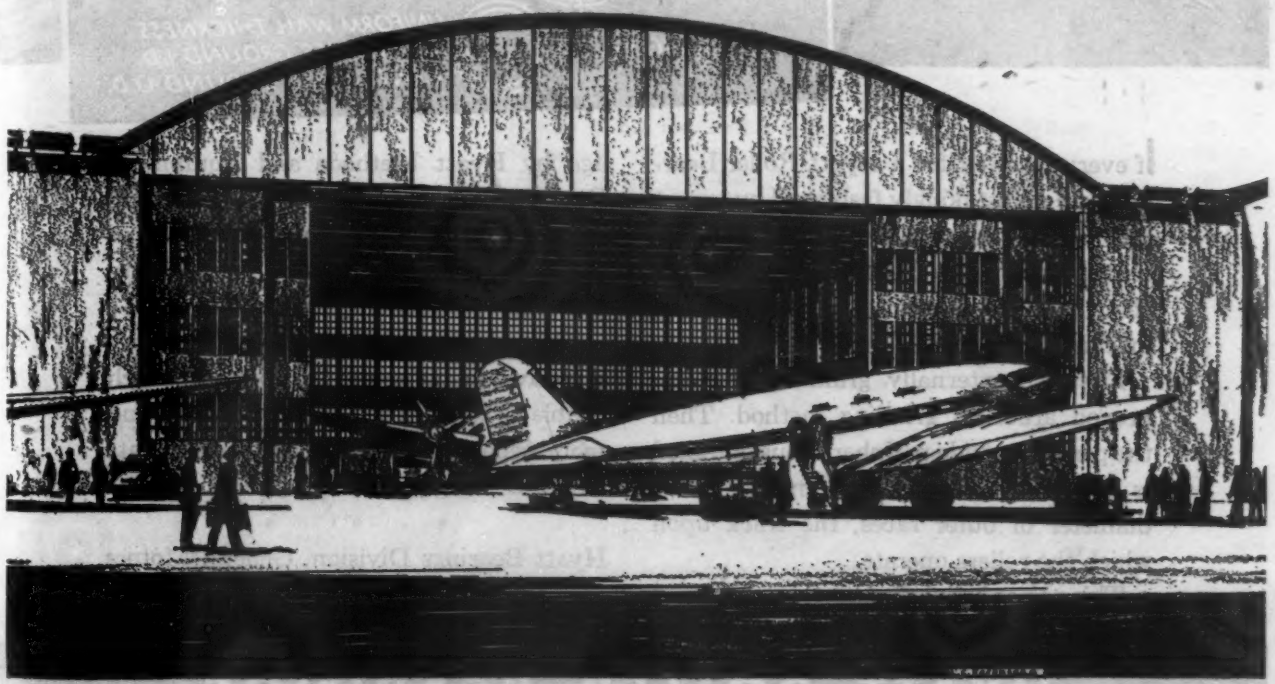
Take a Tip from Aviation

Timber Structures has helped to make construction history in many industries—not the least of which is aviation. From modest sized airplane hangars to huge blimp docks, wood has played a leading part.... For planners of air base facilities have found in timber truss construction the answer to many things: large expanses of clear floor area, structural strength, construction speed, economy and permanence.

The experience of this organization has been gained over a fifteen-year period, and covers assignments for practically every industry in addition to a variety of war emergency construction. This experience is at the disposal of contractors, architects, businessmen in the planning and execution of postwar industrial housing of all types. Our service covers research, design, engineering, prefabrication, transportation, erection. We are prepared to serve you in wood and allied structural materials. Illustrated literature gladly sent on request.... Address the nearest Timber Structures office.

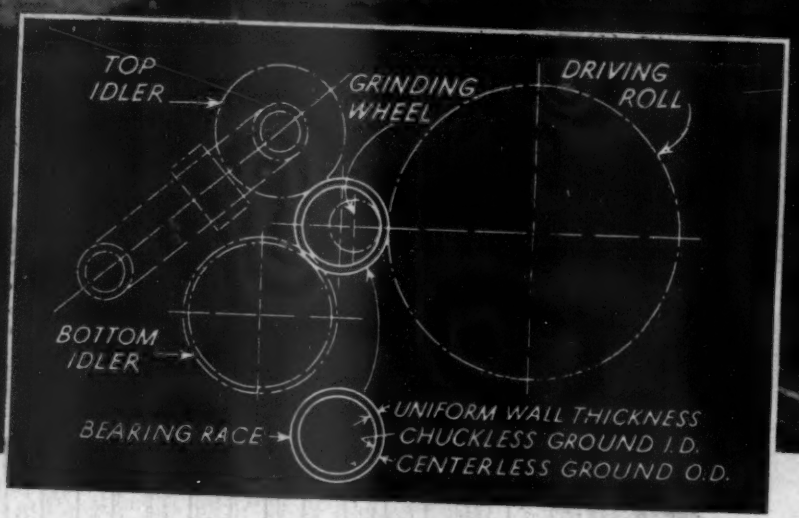
TIMBER STRUCTURES
INCORPORATED
WARD MAYER

Portland 8, Oregon
New York 17, N. Y.



AIRPLANE HANGAR with 160' bowstring trusses; bracing, end wall framing and door guides by Timber Structures, Inc.
Pen drawing by Louis C. Rosenberg. A copy suitable for framing free to architects and engineers on professional letterhead request.

We built the skill of the craftsman into the machine!



If every raceway for a Hyatt Roller Bearing were painstakingly fashioned by expert tool makers they could be no more concentric or of more uniform wall thickness than obtained by our centerless grinding machine production.

First we externally grind by our improved arborless grinding method. Then the perfect outside periphery thus obtained is used as a guide in grinding the inner diameter of outer races, the track upon which the rollers operate.

This new principle invented several years ago by Hyatt Methods and Equipment Engineers we call "Chuckless Grinding." Thus into the machine we built the skill of the craftsman and precision manufacture at a mass production pace was born.

This is just another example of the many exclusive manufacturing processes which enable us to build accuracy, longer life and more dependable performance into Hyatt Roller Bearings for every application.

* * *

Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 119 July 21, 1945 No. 3

PUBLISHED EACH SATURDAY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION, 1309 NOBLE STREET, PHILADELPHIA 23, PA., WITH EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK 7, N. Y. AND 105 W. ADAMS STREET, CHICAGO 3, ILL.

WASHINGTON 4, D. C.: 1081 NATIONAL PRESS BUILDING, CLEVELAND 13: TERMINAL TOWER, SEATTLE 1: 1033 HENRY BUILDING, SAN FRANCISCO 4: 300 MONTGOMERY STREET, ROOMS 805-806. LOS ANGELES 14: 530 WEST 6th STREET, DALLAS 4: 4518 ROLAND AVENUE.

SAMUEL O. DUNN, CHAIRMAN. HENRY LEE, PRESIDENT. ROY V. WRIGHT, VICE-PRESIDENT AND SECRETARY. F. H. THOMPSON. F. C. KOCH, R. E. THAYER, H. A. MORRISON, J. G. LYNE, H. E. McCANDLESS, VICE-PRESIDENTS. J. T. DeMOTT, TREASURER.

SAMUEL O. DUNN, EDITOR. ROY V. WRIGHT, MANAGING EDITOR. JAMES G. LYNE, ASS'T. TO EDITOR. CHARLES LAYNG, WESTERN EDITOR. C. B. PECK. ALFRED G. OEHLER. E. L. WOODWARD. J. H. DUNN. H. C. WILCOX. NEAL D. HOWARD. GEORGE E. BOYD. WALTER J. TAFT. M. H. DICK. JOHN S. VREELAND. C. MILES BURPEE. ARTHUR J. McGINNIS. J. L. STOVER. C. B. TAVENNER. H. E. MEASON. CHARLES ROBINSON. LIBRARIAN: EDITH C. STONE. EDITORIAL ASSISTANT: BETTY KETCHUM.

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PAPERS (A. B. P.) AND AUDIT BUREAU OF CIRCULATION (A. B. C.).

SUBSCRIPTIONS, INCLUDING 52 REGULAR WEEKLY ISSUES, AND SPECIAL DAILY EDITIONS PUBLISHED FROM TIME TO TIME IN NEW YORK OR IN PLACES OTHER THAN NEW YORK, PAYABLE IN ADVANCE AND POSTAGE FREE. UNITED STATES, U. S. POSSESSIONS AND CANADA: 1 YEAR $6.00; 2 YEARS, $10.00; FOREIGN COUNTRIES, NOT INCLUDING DAILY EDITIONS: 1 YEAR, $8.00; 2 YEARS, $14.00. SINGLE COPIES, 25 CENTS EACH. H. E. McCANDLESS, CIRCULATION MANAGER, 30 CHURCH STREET, NEW YORK 7.

In This Issue

Page

How to Retain Heavier Loads per Car 95

Professor G. Lloyd Wilson examines all pertinent I.C.C. cases to establish what kind of rate and other inducements are practicable to offer shippers to encourage the continuance of present high net-to-tare ratio in car loading.

New Hump Yard Speeds War Traffic 100

The Burlington's modern hump yard at Lincoln is described—and it is revealed that this facility with other improvements at the same point is saving 144,000 car-days per annum in its job of accelerating vital transcontinental freight.

Consolidation Is a Normal Process 105

A subcommittee of the A.A.R.'s Committee for the Study of Transportation presents an up-to-date analysis of the merger situation with practical suggestions for accelerating the process where it is desirable.

EDITORIALS

Atrocity Reports on Railroads' Handling of Troops 91
Reserve of Freight-Car Serviceability Getting Low 92
Physical Improvements Paying Off on Western Roads 92
Another Inquiry Into National Transportation Policy 93
Voice of the Passenger 94
O.P.A. Dawdles with Tie Crisis It Has Caused 94

GENERAL ARTICLES

How to Retain Heavier Loads Per Car, by G. Lloyd Wilson .. 95
Self-Improvement Program 98
Cultivating the War-Time Traveler 99
New Hump Yard Speeds War Traffic 100
Consolidation Is a Normal Process 105

COMMUNICATION 107

RAILROADS-IN-WAR NEWS 108

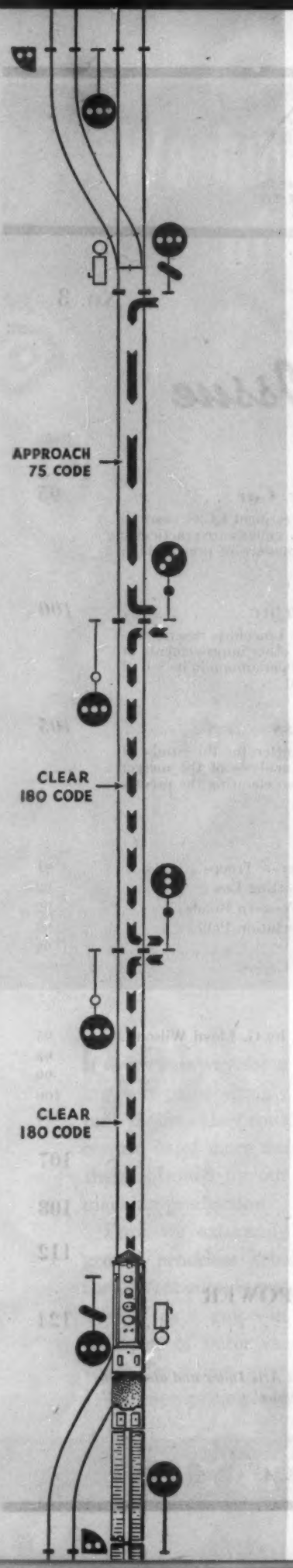
GENERAL NEWS 112

TABLES OF UNIT FUEL AND POWER CONSUMPTION 124

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

★

PRINTED IN U. S. A.



advantages of "UNION" CODED TRACK CIRCUITS in C.T.C. installations

"Union" Coded Track Circuits can be used to advantage in combination with C.T.C. systems and contribute materially to the effectiveness of their operation.

Since Coded Track Circuits transmit signal controls directly through the track rails, signal control wires other than the C.T.C. line can be greatly reduced or entirely eliminated. Approach lighting may also be provided without the use of line wires.

Coded Track Circuits may be as much as 11,000 feet in length. They eliminate cut sections, and at the same time provide better shunting sensitivity and broken rail protection.

A new "Union" development, *normally de-energized* Coded Track Circuit Control is now available. This reduces power requirements; consequently, the storage batteries will have greater reserve capacity or the primary batteries will require less frequent renewals. Alternately, smaller batteries may be specified.

Our nearest district office will be glad to provide full information concerning all applications of "Union" Coded Track Circuits.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

The Week at a Glance

ANOTHER TRANSPORT PROBE: Further details and an editorial on Congressman Lea's proposed transportation inquiry appear in this issue. There is no doubt that, finally, a transportation investigation which will really get at operational facts is long overdue—nor that Congress is the body which should make the investigation, because it is Congress which will have to act on the conditions which the inquiry discloses. Moreover, no one will question Mr. Lea's open-mindedness and the high sense of public duty which has prompted him to initiate this study. Our editorial suggests, however, that the effectiveness of the effort might be improved if members of committees which instigate appropriations for highways, waterways and air transport were included among the investigators; because, unless supply of capital funds for all forms of transport, as well as regulation, is brought into some kind of equality, there cannot be economic harmony in their mutual relationships; and wasteful friction will continue.

●

TROOPS BADLY HANDLED?: Our leading editorial takes up the atrocity stories which are being circulated about the alleged inferior accommodations being provided on the American railroads for returning veterans. The federal government has known for three years that these men were coming home, and it also knew what the railroads' supply of passenger cars was—and it has, in all the intervening period, refused to permit the railroads to build new cars. And now that the movement is on and the car supply is insufficient—the bureaucrats who are responsible for the conditions which have made congestion inevitable permit and encourage criticism of the railroads for the faults which lie squarely upon the bureaucracy and nowhere else. We raise the question as to just how much of this emergency movement rival agencies of transportation are handling; and why it is that only the railroads are expected to have the stand-by capacity lying around to meet any emergency into which the bureaucrats choose to bungle.

●

CONSOLIDATION OUTLOOK: The subcommittee on railroad consolidation of the A. A. R.'s Committee for the Study of Transportation has issued a report which is reviewed in a feature article in these pages. The subcommittee does not propose any "consolidation plan," but it favors mergers of smaller properties into larger systems as a continuing process and believes it would go forward more rapidly if the advantages of the development were more generally appreciated and if some of the political and legal obstacles were removed or mitigated. The personnel of the committee—headed by C. E. Smith of the New Haven—suggested that it would probably have something useful and interesting to say; and the result does not disappoint this expectation.

●

RETAIN HEAVY LOADING?: Will it be practicable for the railroads—by sharing the economies of heavy loading per car with shippers—to induce the retention of high net-to-tare loading ratios after the war? The I. C. C. has in some cases refused to approve rate differences dependent upon varying minimum loads—but a preponderance of cases suggests that rate variations would be approved where genuine differences in operating costs can be shown. Professor G. Lloyd Wilson in an article in this issue reviews the possibilities of progress in this hopeful direction, in the light of a careful study of I. C. C. cases which bear on the question. Professor Wilson, it will be remembered, championed the practicability of "trainload" and "quantity" rates at a time when predominant opinion held that the I. C. C. wouldn't stand for them—and subsequent events sustained his analysis.

●

O. D. T. TAKES COACHES: The O. D. T. this week issued an order taking control over all passenger cars, to enable it to shift them around regardless of ownership for the more effective movement of troops. As the A. A. R.'s Vice-President Buford said, in effect, "We are now compelled to do what we have already been doing voluntarily." The order, however, got a great deal of page-one publicity in the newspapers—so it may have some value, not perhaps unforeseen, in further impressing on prospective "pleasure travelers" that the pleasure in travel has been extracted.

●

FREIGHT CAR SCARCITY: The bureaucrats—who deprecated the railroads' pleas for more generosity in the allocation of materials for new freight cars and for maintenance of the old ones, and who were triumphantly pleased to see the railroads continue to carry on without these materials—should now have their attention called to the freight car condition they have created. An editorial summarizes the facts: the bad order ratio has risen to almost 4 per cent and car shortages are high at a period well in advance of the seasonal peak in traffic. With the poor preparation the railroads were permitted to make, it is inevitable now that the situation will become worse before it can get better. Perhaps it would be well to place the blame, now, where it belongs before some glib bureaucrat tries to lay it on the railroads—as has been done, by innuendo at least, with the passenger car shortage.

●

TIE PRICES UPPED: The O. P. A. has finally got around to raising ceiling prices on crossties—the average increase being 16 cents per tie. An editorial in this issue, written before the new ceilings were announced, reviews the months of fiddling which these latter-day Neros have been doing while the physical foundation of railroad transportation has been rapidly deteriorating because of their unconcern.

●

PATTERSON DISPOSES: President Truman this week issued a public appeal for assistance in finding 65,000 additional employees for the western railroads. On the day following, Assistant War Secretary Patterson flatly rejected an appeal by California Congressmen that more railroad men now in the Army be furloughed for work on the western railroads.

MAY ACCIDENTS: The I. C. C. summary of casualties on the railroads during May and for the five months, with 1944 comparisons, appears in our news pages. There has been a sharp decline, both for the month and the five months, in employee fatalities—but casualties to trespassers and in grade crossing mishaps are on the increase.

●

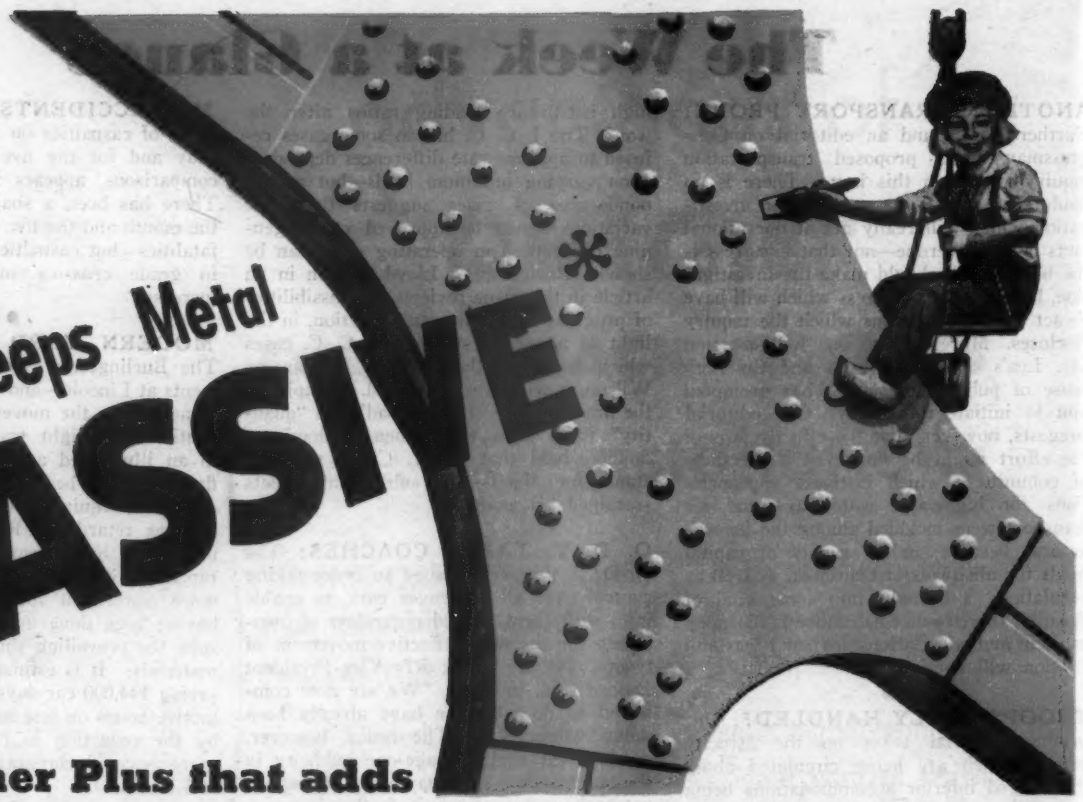
MODERN YARD AT LINCOLN: The Burlington's extensive yard improvements at Lincoln—and what they have done to accelerate the movement of vital transcontinental freight traffic—are dealt with in an illustrated article in this issue. A flat yard has been changed into a hump operation, equipped with power switches and car retarders. Receiving and departure yards have been lengthened and car repair facilities have been moved to a more convenient location—the whole job having been done under heavy traffic, despite the prevailing shortages of labor and materials. It is estimated that the yard is saving 144,000 car-days annually, and locomotive-hours on line have been economized by the reduction in road switching from more thorough classification now being done at Lincoln.

●

EMPLOYEE EDUCATION: B. & M. employees in the Boston area are going to have a chance next fall and winter to choose from a considerable variety of educational courses which will improve their knowledge of their jobs and of the world they live in, and increase their skill at getting along with their fellow-citizens and coworkers. A brief article herein tells of this development, which has grown out of successful courses on a smaller scale conducted last winter. One course is called "personality improvement" and must be aimed primarily at women employees—anyhow it is hard to imagine a masculine railroader braving the remarks of his colleagues to the extent of attending a lecture by an expert on feminine apparel, covering such subjects as care of the complexion and perfection of posture, however much he might benefit by instruction in these and kindred arts.

●

WOULD DELAY RATE CHANGE: The railroads which are required by the Commission's order in the class rate case to make interim changes in these rates—in advance of establishment of full uniformity in all territory east of the Rockies—have presented a prayer to the I. C. C. that the effective date of the interim changes be put off till April 1, next year. The revisions require just too many arithmetical computations for available forces to complete in the time permitted by the I. C. C.'s order. Various organizations in Northern states are seeking a delay in the effective date of the order, and ask for the case's reopening. New England petitioners note that the I. C. C. has not found present Eastern class rates to be less than reasonable, and they plainly are opposed to being forced to pay rates higher than the not-unduly-low rates now charged, merely to gratify the clamor of competitive producing areas.



Keeps Metal PASSIVE

...another Plus that adds to RED LEAD'S Extra Rust Protection...

There is no question about Red Lead's acceptance throughout industry as the standard priming paint for *making metal LAST*.

One important reason is its ability to keep metal surfaces in a "passive" or rust-inhibiting state. Authorities agree that metal protective paint should be rust-inhibitive to give satisfactory performance.

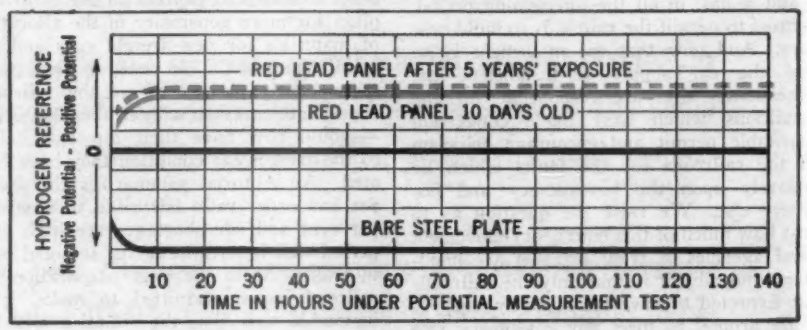
Time-potential curves, such as the one at right, are used to express rust-inhibitive properties of paint and thus indicate its effectiveness of protection. They show the effect of Red Lead on the potential of steel in the presence of moisture or water.

For example, a steel panel whose potential is *positive*, relative to hydrogen, is considered to be in a passive or non-corroding state. A negative potential indicates corrosion activity or rusting. The graph shows clearly the rust-inhibitive effect of Red Lead paint on steel as contrasted with the rapid and continuous rusting of unpainted steel.

Note that in this test a Red Lead paint film which had weathered 5 years was just as effective in preventing rust as one which had dried for only 10 days.

Specify RED LEAD for All Metal Protective Paints

The value of Red Lead as a rust preventive is most fully realized in a paint where it is the only pigment used. However, its rust-resistant properties are so pronounced that it also improves any multiple pigment paint. No matter what price you pay, you'll get a better metal paint if it contains Red Lead.


HYDROGEN REFERENCE
Negative Potential - Positive Potential
0
RED LEAD PANEL AFTER 5 YEARS' EXPOSURE
RED LEAD PANEL 10 DAYS OLD
BARE STEEL PLATE
10 20 30 40 50 60 70 80 90 100 110 120 130 140
TIME IN HOURS UNDER POTENTIAL MEASUREMENT TEST

*Proof That Red Lead Keeps Metal Passive

In the above test a piece of unpainted steel was immersed in water. Iron, going into solution, reacted with oxygen in the water to form rust. This unrestrained corroding state is indicated by a rapidly developed and maintained negative potential (see above graph). However, when steel panels painted with Red Lead were immersed under the same conditions, ferric and lead salts formed directly next to the metal. This action at once stifled corrosion by preventing the iron from going into solution, thus keeping the steel surface passive. The result is shown in the graph curves above, where a quickly rising positive potential remains constant throughout the test.

Write for New Booklet—"*Red Lead in Corrosion Resistant Paints*" is an up-to-date, authoritative guide for those responsible for specifying and formulating paint for structural iron and steel. It describes in detail the scientific reasons why Red Lead gives superior protection. It also includes typical specification formulas ... ranging from Red Lead–Linseed Oil paints to Red Lead–Mixed Pigment–Varnish types. If you haven't received your copy, address nearest branch listed at right.

All types of metal-protective paints are constantly being tested under all conditions at National Lead's many proving grounds. The benefit of our extensive experience with Red Lead paints for both underwater and atmospheric use is available through our technical staff.

NATIONAL LEAD COMPANY: New York 6, Buffalo 3, Chicago 80, Cincinnati 3, Cleveland 13, St. Louis 1, San Francisco 10, Boston 6 (National-Boston Lead Co.); Pittsburgh 30 (National Lead & Oil Co. of Penna.); Philadelphia 7 (John T. Lewis & Bros. Co.); Charleston 25, W. Va. (Evans Lead Division).

DUTCH BOY RED LEAD

RAILWAY AGE

Atrocity Reports on Railroads' Handling of Troops

There is a more than faint odor of Machiavellianism in the recent extensive press-agenting of hardships alleged to have been inflicted by the railroads on returning troops. The railroads, the Pullman Company, the Office of Defense Transportation, and the officers of the Army's transportation corps have exerted themselves to the utmost since the early days of the war to provide the maximum of efficiency and comfort for troop movements, and there is no evidence that they have suddenly lost their interest and skill in this work. Meantime, others more influential in the government have done their planning with no regard to the necessities or even convenience of domestic transportation.

Undersecretary of War Patterson said in a statement quoted in *Railway Age* of July 14 that the War Department on June 26 had foreseen and expressed itself critically about the "possibility" of some congestion. Others, including *Railway Age,* had foreseen and forecasted for years before that, not the possibility, but the *certainty* of serious congestion. It was certain because, first, a large decline of passenger equipment occurred during the depression; second, the government during the war has been refusing to let the railroads acquire additional passenger equipment; third, an enormous increase in travel by rail was occurring, and, fourth, a huge transfer of troops from Europe to the Pacific area was sure to be made following termination of the war in Europe.

Let us look at the record of previous performance. During World War I the railroads and Pullman Company owned passenger-carrying cars as follows: Coaches and combination cars, 33,241; sleeping cars, 8,681; total, 41,922. In 1918, with this amount of equipment, the railroads rendered 43 billion passenger-miles of service, or about 1,000,000 passenger-miles per car. In 1941 the railroads and Pullman Company owned only 20,329 coaches and combination cars and 7,378 parlor and sleeping cars, a total of 27,707, and rendered over 29 billion passenger-miles of service, or about 1,060,000 per car.

When this country entered the war there were on order 389 passenger-carrying cars, and the carriers desired to acquire many more, but the government prevented it. In consequence, in 1944 there were only 20,524 coaches and combination cars and 8,136 parlor and sleeping cars, a total of 28,660. With this amount of equipment the railways in 1944 rendered a service of almost 96 billion passenger-miles,—3,335,000 per car, or about 235 per cent more per *car* than in 1918 or 1941. The 1945 passenger load is expected to be more than 100 billion passenger-miles—two and a half times the load carried in 1918, and four times the load in 1941; and yet the railroads are expected to carry it with 30 per cent less cars than in 1918 and about the same number as in 1941.

"We have been promised relief," Mr. Patterson said, "but relief has not been forthcoming. . . . You may be sure and certain that the War Department will press for decent and comfortable accommodations for troops . . ." The War Department has known all along just how many sleeping and other passenger cars are available on American railroads, and just how many arriving troops could be accommodated by this number of cars without disrupting regular travel. The return of troops from Europe is an event that the Army has had over three years to prepare for, and the government has had control of the man-power and the materials necessary for such preparation. If the means are not now at hand to provide the kind of accommodations for returning troop movements that Mr. Patterson "insists upon," then the responsibility rests squarely upon top management in government and not upon the railroads, the Office of Defense Transportation or the Army's transportation officers. Because of the way ships are arriving, tens of thousands of troops are disembarking on one day and then none at all for several days. Surely anybody should know that the railways cannot deliver their full capacity of service with a load permitted to fluctuate so widely.

There is no reason for troops to have to ride in crowded and uncomfortable cars except that government "planned in that way." And it is that kind of disregard for transportation needs and human comfort which explains the increasing shortage of freight cars and why business men in New York with a day's work to do in Pittsburgh or business men in Chicago with a day's work to do in Cincinnati have to go to their nationally-important duties after sitting up all night in day coaches. Many returning troops report that they came down to the Atlantic ports of Europe in journeys of four or five nights' duration in "40 and 8" box cars, beside which any accommodations yet provided them in America are luxurious in the extreme—and probably few of them would be inclined to criticize the travel facilities so far offered them here, if a calculated effort were not being exerted to make them believe that they are being deliberately mistreated.

We see no reason why the railroads should quietly submit to being blackguarded for a failure which is not theirs by officials of a government that is primarily responsible for the conditions which are criticized. Nor do we see any reason why a business man forced to ride all night in a day coach on a necessary trip should refrain from criticism of an officialdom which has unnecessarily inflicted this discomfort upon him.

It is significant that the bureaucracy is forcing the

railroads to withdraw Pullman services at the very time when the airlines are being awarded additional planes, enabling them to expand their commercial traffic. The government, that is to say, is driving the railroads' steady customers to the airlines. And just what part of this emergency movement of troops are the railroads' competitors—the long-haul buses and the airlines—being called upon to handle? How many overnight planes have been pulled off their regular runs to serve the "redeployment" program, and how many overnight buses have been diverted from their regular runs for this purpose? The answer is that only the railroads among all the agencies of transportation are expected to have the "stand-by" facilities to deal with such emergencies as this, and are criticized for not having them.

The railroads have made too good a record and won a too favorable public opinion during the war to suit the planners of national socialism. Some opportunity to smear them had to be found; and the passenger service situation created by the return of the troops from Europe has been seized upon as the long awaited opportunity.

Reserve of Freight-Car Serviceability Getting Low

Evidence accumulates that the physical condition of freight rolling stock in the United States, long declining because of (1) failure to receive an adequate supply of new freight cars, (2) difficulties in the way of securing all the material needed to restore existing cars as they became due for heavy repairs, and (3) a decline in the number and quality of freight car repair forces, will progressively become a limiting factor on the amount of freight transportation which the railways can produce.

The growing inadequacy of the car supply is indicated by the sharp decrease in car surpluses reported during the first half of 1945 as compared with the first half of 1944, and the equally sharp increase in shortages. The surpluses, which during the first quarter of 1944 were running in the neighborhood of 20,000, were only about 13,000 during 1945. During the second quarter the comparison is between 23,000 to 25,000 in 1944 and 12,000 to 18,000 in 1945. Shortages, which ranged from 3,500 to nearly 8,000 during the first quarter of 1944 and dropped well below 1,000 during the second quarter, have been running from 12,000 to 19,000 during the first half of 1945 until late in May, since when they are still ranging from 6,000 to over 7,000. Carloadings during the second quarter of 1945 have exceeded those of any second quarter during the war, but there is a definite, though not large, trend downward in the tons per loaded car.

The percentage of cars out of service for repairs has been a deceptive index of the physical conditions of freight cars for more than two years. Now the 2.5 per cent which prevailed during the first half of 1944 has been going up; it reached 3.9 per cent on June 1, a figure which reflects the effect of the emergency "home for repair" order of the A. A. R. of May 10 and is a truer indication of actual equipment conditions than the low percentages which prevailed during the early months of 1944. That this is yet high enough to reflect the real supply of cars capable of rendering full transportation service, without risk of undue delays en route, is open to question.

But the growing car shortages tell the tale. Further test will come during the third and fourth quarters in which the normal fall peak demand runs on into the winter months. The reserve of serviceability is now so low that it can scarcely be improved without temporarily, at least, still further curtailing it. The limitations on transportation chargeable against the freight-car supply are, therefore, not likely to get better until they have become worse.

Physical Improvements Paying Off on Western Roads

From the moment the Japs struck Pearl Harbor on December 7, 1941, the trans-continental railroads of the country were aware that they were headed for the greatest transportation load in their history. Within a few hours from that strike they were rushing thousands of army personnel and large quantities of material to the Pacific coast, starting a procession that in recent weeks has hit new records, with still higher peaks to be reached in the months ahead.

Foreseeing this heavy load as inevitable, the Western lines set about promptly to study their needs to meet the demands and, fortunately, recognized at the outset that, the adequacy of their motive power and rolling stock to the contrary, their success in handling the record traffic to come depend in large measure upon the adequacy and integrity of their fixed property. With this premise constantly in mind, each of these roads has spent millions of dollars during the past three and one-half years to expedite the movement of trains at critical points, to improve the performance of every unit of motive power and rolling stock, and to increase the over-all carrying capacity of its lines generally. The work involved has included extensive installations of automatic block signals and centralized traffic control; the construction, relocation and lengthening of hundreds of passing tracks and sidings; the construction or strengthening of numerous bridges; the lengthening of tracks at and otherwise increasing the capacity and efficiency of yards; and the improvement of enginehouses, shops, fuel and water stations, and a wide range of other facilities.

Of the various yard projects that have been carried out, two of the most outstanding have been those of the Burlington at Galesburg, Ill., and Lincoln, Neb., the former of which, completed late in 1942, was described in the *Railway Age* of March 6, 1943, and the latter of which, only now being completed, is described in an article in this issue. At each of these key points on the road, at a cost exceeding $1,000,000 at each point, a modern gravity classification yard, equipped with car retarders and power switches, has been built, supporting yards have been enlarged and lengthened, and numerous changes in and additions to other facilities have been made—all in the interest of the more rapid

classification of cars at these points and the speeding up of war traffic generally.

That these ends have been achieved is clearly set forth in the articles describing these projects, the Lincoln improvements alone resulting in savings of approximately 400 car-days per day and substantial savings in locomotive-hours on line through more rapid classifications, reduced average time between the arrival and departure of trains, the ability to make up and dispatch heavier trains, and a reduced amount of switching en route.

Such achievements are a tribute to the ability and co-operation of the engineering and operating men involved, and especially since the work at both points was done under traffic and in the face of delays in the receipt of materials and serious shortages of labor. During the months ahead, as the war in the Pacific places added demands on the Western roads, these improvements, as well as the many others completed on the Burlington and other Western lines, will prove of inestimable value. In fact, it is readily admitted in well informed quarters that if it had not been for these improvements the transportation job ahead could not be done; indeed, that war traffic on the Western roads would have already been badly snarled.

Another Inquiry into National Transportation Policy

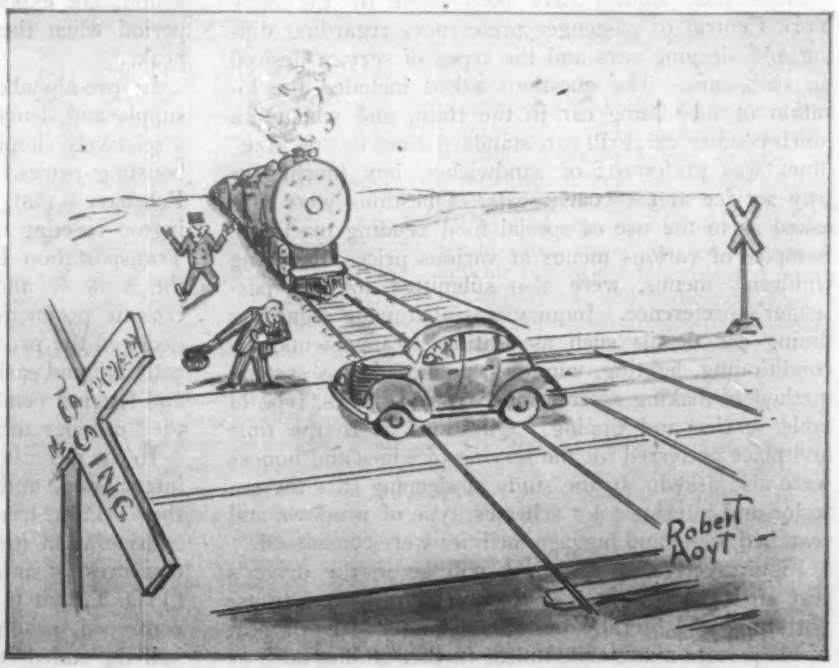
Chairman Clarence Lea of the House Committee on Interstate Commerce, as was briefly reported in last week's *Railway Age,* is seeking authority from the House to conduct a comprehensive investigation into the nation's dealings with its several agencies of transportation. Mr. Lea did not exaggerate the seriousness of the situation into which he proposes inquiry when he said, in urging the granting of the authority to initiate the examination, that there are flaws in conditions as they now stand which threaten to "throw our economy into chaos."

Chairman Lea has and deserves the respect of everyone in the transportation business who has had the good fortune to know him and his work. Naturally, since the subject matter with which he deals is controversial, those who admire him will frequently disagree with specific proposals which he advocates—but it is not possible for honest and patriotic persons to quarrel with his intentions and his objectives, which are defined by his integrity and his loyalty to the general welfare.

Mr. Lea proposes that the inquiry into transportation policy be conducted by a sub-committee of the House interstate commerce committee. As to this *means* to the end which he is seeking it seems necessary to raise a serious question. There have been a number of searching investigations into transportation policy in the past twenty years, none of them more than fragmentarily productive of useful results—and the patent reason for the impossibility of success of any of them has been that none of them went critically into the question of *the sources of capital supply for the provision of new facilities* of agencies of transportation other than the railroads.

Since the passage of the Transportation Act of 1920, Congress has enacted two major pieces of legislation having to do with overall policy toward transportation —the first being the Motor Carrier Act of 1935, and the other the Transportation Act of 1940, which embodied regulation of water carriers. The enactment of both of these measures was preceded by a volume of investigation, argument, analysis and mental toil of dismaying magnitude—but the results, as far as any tangible contribution to the solution of chaotic competitive conditions in transportation is concerned, have been negligible.

The reason for this failure lies in the fact that only a small fraction of the carriers operating upon the highways and the water are common carriers and, for that reason, subject to orderly control by the process of regulation. The predominant traffic on these publicly-owned "roadways" is private or contractual, and the only possible means of bringing such traffic into any kind of economic harmony with other traffic is through the operation of the ordinary force of equal and fair competition. But the effective control which such competition could exercise in the national economic interest has been circumvented by the provision of highways and waterways by political appropriations without requirement of payments by users tallying closely with their degree of use of these facilities. With such economic anarchy in the financing of highway and waterway



"Come on, Casey, that's carrying our courtesy program just a little bit too far."

facilities, a similar anarchy and unpredictability in their use has followed of necessity.

Until some dependable economic control over the provision of transportation facilities in public ownership is established the "chaos" which Chairman Lea fears cannot be avoided. The inquiry proposed by him cannot succeed unless it includes this important aspect of the transportation problem—but *the House and Senate committees on interstate commerce have no authority over government expenditures on waterways and highways;* and it is not likely that the committees which do have such jurisdiction would recognize or submit to findings on such a subject unless they had participated in the inquiry which preceded the recommendations.

Is it not, therefore, a reasonable conclusion that the proposed Congressional investigation into transportation policy would have far greater chances of success if officially designated representatives from the House committees having to do with authorizations of federal expenditures on highways and waterways (and air transport facilities as well) were called upon to participate in the inquiry?

Voice of the Passenger

Some of the most outstanding studies which have been made to enable a railroad management to plan a post-war passenger service with maximum customer appeal have been conducted by the New York Central. These studies have been based, primarily, upon inquiry among prospective patrons. The details of the study of the post-war railroad coach, as seen from the standpoint of passenger preference, were given in the last Passenger Progress Issue of the *Railway Age,* November 18, 1944.

Since then studies have been made by the New York Central of passenger preferences regarding dining and sleeping cars and the types of service desired on such cars. The questions asked included the location of the dining car in the train, and whether a lunch-counter car, grill car, standard diner or "de luxe" diner was preferred; or sandwiches, box lunches or tray service at the coach seats. Questions were also asked as to the use of special food vending machines. Samples of various menus at various prices, including children's menus, were also submitted for the passenger's preference. Inquiry was also made regarding dining car details such as seating arrangements, air conditioning, lighting, windows, public address system, method of making reservations, type of dishes, type of table service and tipping. Questions as to the time and place preferred for the serving of wines and liquors were also asked. In the study of sleeping cars the exterior and interior color schemes, type of windows and seat, bed, toilet and luggage facilities were considered.

Figuratively, the passenger will be in the driver's seat after the war in the selection of means of transportation, and literally he will be in the driver's seat of his private automobile unless further studies such as those of the New York Central and other roads are made and acted upon.

O. P. A. Dawdles with Tie Crisis It Has Caused

Subversive influences to disrupt and halt the production of basically essential railway crossties could hardly have been more successful in their early stages than the lethargic and shortsighted methods of our own government bureaucracy. For, despite the fact that the production of crossties has been decreasing for almost a year, despite warnings and entreaties, despite the restrictive influence of its own self-imposed discriminatory lumber prices, despite established crosstie prices so low that they spell loss in many instances, the O. P. A. has yet to make a constructive move to remedy the dangerous situation its actions and inertia have created.

Government representatives have scoured the entire production field in collecting first-hand data on crosstie production. Rumors have been rife for weeks that an increase in ceiling prices is imminent. Rumor added that the increase would be as much as 35 cents for size five red oak crossties, with appropriate gradations for other sizes and species. Added to this were reports that the price increases would not apply to ties held in stock.

The net result of the disturbing influence of O. P. A.'s field investigations and the lack of appropriate action by that agency has been that tie production in many areas has slowed to a dribble. In other territories it dropped 40 per cent in the last month compared to the record of the preceding month. One railway buyer reports that some producers are flatly refusing to ship crossties on the old price basis—they are holding for the 35-cent increase. Another railway tie and timber agent, back in his office after an extended trip through a large production territory, declared that in his estimation fully a month's production of crossties has been lost in that area by O. P. A.'s silence regarding its intentions and from its dilatory methods. Furthermore, the ties that have been sawn and left in the woods, awaiting O. P. A.'s action, are exposed to infection and attack during a period when these destructive influences are at their peak.

In pre-alphabetical-agency days, before the law of supply and demand had been thwarted, it usually was a relatively simple matter to increase tie production by boosting prices. Today, it is different. It was last February 6 that, at the O. D. T.'s suggestion, a Washington meeting of representatives of the Lumber and Transportation Equipment Division of the W. P. B., the A. A. R. and W. M. C. was convened to consider crosstie production. On February 17 the W. M. C. declared the production of railroad crossties a "critical activity" and early last June the W. P. B. added lumber and logging (embracing the production of crossties) to the "urgency must list."

In the meantime the industry advisory committee was interviewed, and it has been common knowledge that the O. P. A. has had the matter of ceiling prices under consideration for weeks. The ineffectiveness of these measures is summed up in a recent statement of the O. D. T. that if the present trend of crosstie supply is continued, production for 1945 will approximate only half the stated requirements. How desperate must the situation become before effective action to increase tie production is forthcoming?

How to Retain Heavier Loads per Car

An examination of the practicability of offering rate and other inducements to retain in peace the economies enforced by war—I. C. C. attitude is explored

By G. LLOYD WILSON
Professor of Transportation & Public Utilities, University of Pennsylvania

Part I

FEW problems now confronting railroad and industrial traffic managers are so important a post-war question as increasing the efficiency of freight car service by retaining the benefits of the heavier loading of cars, achieved as one of the most praiseworthy accomplishments of shippers, carriers and the Office of Defense Transportation during the present war emergency. The heavier loading of cars under O. D. T. Orders Nos. 18 and 1, and their several amendments, added car supply which accommodated the heaviest traffic in history with a number of cars which would have been tragically inadequate if heavier loadings had not been secured.

The load per car of Class I line-haul railways increased from an average of 38.1 tons in 1941 to 41 tons in 1943, an increase of nearly 3 tons per car. In the twenty years between 1920 and 1940, the average load per car increased irregularly year by year from 34.5 tons in 1920 to 37.7 tons in 1940.

Decline Has Begun

The increase in the average load per car of certain selected commodities shown in the accompanying table indicates the progress made under the heavier loading orders, in representative years 1936 to 1943 and for the month of November, 1944. The figures for 1943 are the latest available data on an annual basis. The monthly figures for 1945 so far published indicate, in most commodities, that a substantial recession from the 1943 averages has already taken place. Scattered observations in 1945 confirm this trend. It is desirable that steps be taken to check the decline and to retain the advantages of heavier loadings. In order to achieve this result ways must be developed which will be attractive and equitable to shippers and carriers.

Average Load Per Car Originated
Class I Railways

I. C. C. Item No.	Commodity	Average Loads Per Car, Tons Years Ending December 31: 1936	1940	1941	1942	1943	Month of November 1944
850	All Carload Traffic	36.32	37.66	38.15	40.14	41.01	39.60
840	Manufactures and Miscellaneous	26.59	27.42	27.93	30.45	31.95	30.54
540	Cement, Natural or Portland, Building	35.86	36.14	39.15	45.38	48.00	41.67
300	Bituminous Coal	53.48	54.88	55.24	55.86	56.56	56.70
310	Coke	34.68	35.74	35.63	36.22	36.17	36.20
351	Stone, Broken, Ground or Crushed	55.54	56.30	57.12	57.38	57.12	57.50
430	Lumber, Shingles and Lath	27.80	27.58	28.33	30.43	33.81	33.42
10	Wheat	44.19	46.28	46.94	49.58	50.03	50.19

Source: "Freight Commodity Statistics," Bureau of Transport Economics & Statistics, I. C. C.

The retention of the benefits of heavier loading of freight cars in order to conserve car supply in the post-war period is desirable both to shippers and carriers, but methods to produce this result should include inducements to encourage shippers and consignees to load cars more heavily and to accept heavier loaded cars. All such plans contemplate loadings materially in excess of the present carload minimum weights, and provide devices to share the benefits between the carriers and shippers and consignees.

The railroads derive unmistakable advantages from heavier loading through the more efficient use of freight cars as a result of loading the total freight traffic in a smaller number of cars, thus increasing the effective car supply. The heavier loading of cars also tends to decrease the tare weight of freight cars in proportion to the net weight of the shipments transported, thereby increasing the effectiveness of the use of railroad motive power. There is a corresponding decrease in switching per ton of freight transported at points of origin and destination and in intermediate yards because of the decreased number of freight cars required to carry an equivalent quantity of freight. There is also a reduction in per diem payments and in rentals or allowances paid for leased cars, as well as reduction in the trackage and yard space needed per ton of freight transported. Shippers and consignees also benefit from the heavier loading of cars, but such benefits are usually not sufficiently evident to serve as an inducement to action unless some provision is made in rates to share with the buyers of transportation, at least some of the direct monetary savings which heavier loading of cars achieves for the carriers.

Some Disadvantages

Offsetting to some extent the advantages of heavier loading, there is added expense of loading, stowing and bracing the heavier loads, necessitated by the stacking or tiering of the goods and the additional bracing required. In some cases, at least, it costs more per ton to load and unload goods with the more heavily loaded cars because of the added labor cost of lifting and lowering the goods to and from the higher tiers and applying and removing the added bracing. There is at least a possibility that there would be some additional demurrage charges, arising from inability to unload more heavily loaded cars within the period of free time or within the first 24 hours after placement, so that the opportunity to earn credits under the average agreement might be prejudiced.

The dual or multiple rates and carload minimum weights would make freight rate structures more complex and add to the difficulties of tariff interpretation and application and complicate billing. "Twilight zones" of charges would be set up, which would make difficult the determination of charges at the higher rates and lower minimum weights or the lower rates and higher carload minimum weights with respect to quantities of freight greater than the lower minimum carload weights and less than the higher minimum weights. This complication would probably increase billing expense and errors and increase the number of overcharge and undercharge claims. The use of dual rates and minimum weights would make more complex the already difficult task of the selection and matching of inbound and outbound billing at transit points where goods are stored, milled or fabricated-in-transit.

Marketing Problems

The choice of several rates and sizes of lots of goods to be shipped or received poses several problems in the marketing of the goods. In some cases, buyers do not have storage facilities adequate to accommodate larger lots of shipments, or either cannot or do not wish to finance larger-lot shipments. Larger buyers or dealers in large cities may be able to purchase, finance and store larger lots, while their competitors in outlying suburban sections or nearby towns may not. Under conditions of

keen competition in some trades, the sellers may be tempted to quote prices and to book orders on the basis of the lower rates and higher quantities but actually ship the goods in smaller carload lots at the higher rates and cut prices through this device.

These problems and others which stem from them must be considered and the advantages and disadvantages weighed. The perfume of the rose must be judged with due consideration to its thorns. Consideration should also be given to the questions of the lawfulness of these rates in the light of the Interstate Commerce Act and the decisions of the Interstate Commerce Commission where the question arises of alternative rates conditioned upon different carload minimum weights. An examination of some of the principal decisions of the Commission is helpful in determining the course to be taken by carriers and by shippers in approaching the problem.

Inducing Heavier Loading

It is apparent that no one plan of inducing heavier loading is suitable for all commodities or for all industries, or even for the same commodities and the same industries under all conditions and circumstances. It is desirable, therefore, that several methods of adjusting carload minimum weights and rates should be considered by the carriers and by shippers and consignees to find the plan best suited to the circumstances prevailing in different trades and equitable to all.

Increased Carload Minimum Weights—First there is the possibility of increasing carload minimum weights by increase in the classification minimum weights or in the minimum weights provided for in commodity or exceptions to the classification tariffs without any change in ratings provided for in the classification or in the rates named in the tariffs. This method, generally, is unattractive to shippers and consignees and does not serve as an incentive to heavier loading. In this connection the carriers might, if necessary, apply to the Interstate Commerce Commission for a general minimum weight increase in the same way as they would proceed in seeking a horizontal increase in freight rates.

Allowances for Extra Handling Costs—A second method is the making of adequate allowances for the extra costs of tiering, stacking and bracing of the more heavily loaded shipments. It costs more per hundred pounds to load and unload heavier loaded shipments, and it is reasonable and equitable that the shippers and consignees should be compensated for these extra expenses either by reduction in rates or in allowances to cover the additional labor costs.

Dunnage Allowances—A third method of inducing heavier loading of cars is by allowances for the extra dunnage and bracing made necessary by the heavier loads. This plan requires that consideration be given to the quantities of dunnage or bracing required for shipments of different commodities loaded in different quantities in open-top and box cars; to allowances for the materials and labor costs of installing and removing the necessary quantities of dunnage; to the shipment of goods of different types on skids or platforms; to the use of pallets; to the return of dunnage, skids or pallets; and to the encouragement of skid or pallet pools so as to reduce the amount of transportation required.

Stop-Off Arrangements—A fourth plan to be considered is to continue reasonably adequate arrangements to permit the stop-off of cars to complete loading or for partial unloading en route at through rates and reasonable charges for the stop-off privilege.

Lower Rates on Excess Freight Over Carload Minimum Weights—A fifth device is the continuation of present freight rates and carload minimum weights with lower rates on the amounts of freight loaded in the cars in excess of the carload minimum weights. This plan has been advocated particularly by Southern railroads on such commodities as cigarettes. It presents difficulties, however, in connection with the quoting of prices for goods to be shipped from sellers to buyers because it cannot be known in advance what quantities will be shipped in each car or lot. It appears to have merit in connection with the forwarding of goods from factories to warehouses or branches when the shippers and consignees are the same companies.

Different Carload Minimum Weights and Rates for Shipments in Different Types of Cars—A sixth method is the establishment of different carload minimum weights based upon the types of freight car used without differences in the rates. The different minimum weights should be prescribed for the commodities loaded in different types of cars based upon the reasonable carrying capacity of the cars with due regard to commercial consideration. This method appears to be particularly attractive for use in certain industries, such as cement, where one scale of rates might be fixed for the transportation of cement in bags or barrels in box cars and another higher minimum weight prescribed for bulk cement shipped in covered hopper cars. Consideration should be given, in working out such an arrangement, to the desirability of different rates for the goods shipped in different types of cars when they can be loaded to materially different weights in the different types.

Alternative Carload Minimum Weights and Rates—Finally, there is the method of establishing two or more carload minimum weights with different rates for the dual or multiple minimum weights. The suggestion has been made that the present carload rates and present carload minimum weights be continued on the present bases, with lower rates for higher carload minimum weights. Two or three minimum weights and rates have been recommended. There does not appear to be any set or equitable formula for the percentage of reduction in rates to be coupled with a percentage increase in carload minimum weights. The evidence points to a conclusion that separate consideration should be given to different commodities so as to give adequate consideration to their transportation and commercial characteristics. It is probable that if this plan of rates is used in connection with certain types of traffic, adjustments in the rates may be necessary to protect transit arrangements to avoid prejudice against intermediate transit operators.

Multiple Minima Not New

Dual or multiple carload freight rates upon the same commodities between the same points of origin and destination conditioned upon dual or multiple carload minimum weights are not new, but new interest in the matter has been aroused by war-time experience with high carloadings.

The railroads of Official Classification Territory in January proposed for consideration by shippers the establishment of domestic rates 10 per cent lower than present rates with increased carload minimum weights upon a limited number of commodities, including butter; cheese; canned goods including meat; milk; fruits and vegetables; cured meats; green salted cattle hides; soap and washing compounds; iron and steel manufactured articles; alcoholic liquors; cigarettes; peanuts; and printing, wrapping, building and prepared paper. These rates are proposed to be used alternatively with the present rates at the present carload minimum weights in order to continue and to encourage the heavier loading of freight cars.

The proposal contemplates that the alternative rates will apply in connection with shipments in standard box cars, open-top cars or refrigerator cars, and that the shipments will be entitled to not more than one stop-off in transit to complete loading or for partial unloading. It is also proposed that the lower alternative basis of rates will not be subject to the rules of the Consolidated Freight Classification governing freight in excess of full carloads and the use of the carload minimum weights of cars ordered rather than cars furnished by the carriers.[1]

Hearings were scheduled by the Traffic Executives Association, Eastern Territory, to be held in Chicago in February, but were postponed indefinitely in order to avoid the travel incident to attendance at the meetings. Meanwhile the subject is being considered by shippers and consignees individually and by associations throughout the country.

Trade Relationships Affected

Although the present proposals include only a few commodities which move in large volume, the suggestion is one of great importance not only to the

[1] Consolidated Freight Classification, Rule 24 and Rule 34, Sections 2 and 6.

shippers and consignees of these commodities but as a major post-war problem. It effects the general rate structure of the carriers and the relationships among rates; and the trade practices of buyers and sellers, the marketing of commodities throughout the United States, and the competitive relationships of large and small shippers and large and small consignees.

The advantages and problems of this method of inducing and compensating heavier loading is one which concerns every industry as shipper and consignee throughout the United States. An opportunity is afforded by the postponement for the consideration of the consequences of this plan of rate-making, so that when the hearings are held shippers and carriers, by adequate study, may be better qualified to express their views.

Prescription of Alternatives

The Commission, generally, has refrained from prescribing different levels of rates on the same commodities between the same points in cases coming before it on complaints.

In *Lafayette Box Board and Paper Co. v. A. C. & Y. R. Co. et al.* the complainants sought a rating of 80 per cent of sixth class, carload minimum weight 40,000 lb., and an alternative rating of 80 per cent of sixth class with a minimum of 60,000 lb. The average carload shipment was found to be 49,100 lb. The Commission, by Division 4, found the existing rates subject to a single carload minimum weight of 36,000 lb. not to be unreasonable, unjustly discriminatory, or unduly prejudicial, and dismissed the complaint. The Commission stated: "It is not our policy or that of the carriers ordinarily to make alternative rates based on different minima but a few instances may be found where the carriers have departed from the rule."[2]

The complainant in *Mathieson Alkali Works v. L. & N. R. Co., et al.* sought a dual minimum weight and rate basis of rates on caustic soda, soda ash and soda products contingent upon carload minimum weights of 30,000 lb. and 60,000 lb. and pointed to instances where alternative rates on lime were based upon 30,000 lb. carload minimum with rates 20 per cent lower upon shipments subject to 60,000 lb. minimum weight. The Commission stated that instances of dual rates and minimum weights were rare and that the action taken in the *Lafayette Box Board Case* should be its guide in the future. It observed that "alternative bases are generally undesirable, in that they are liable to deprive carriers of reasonable carload revenue, result in unjust discrimination by affording different rates on the same commodity, entail wasteful use of equipment, and complicate the rate structure and the process of computing freight charges. A shipper should pay a reasonable charge per car, regardless of how it is arrived at. Defendants would leave the shipping public to adjust itself to the single basis they here suggest (40,000 lb., carload minimum weight). They say it should at least be given a fair trial.[3]

In *American Popcorn Company v. A. T. & S. F. R. Co. et al.* the complainant sought rates based upon a 60,000-lb. carload minimum weight upon a lower basis than the existing rates upon a minimum of 40,000 lb. The complainant shipped its products to warehouses located at 25 places in the United States and distributed the goods from these warehouses in smaller lots. The average weight of shipments to the warehouses was 42,000 lb. per car. The complainant stated that it could and would load the cars in excess of 60,000 lb. per car if the lower rate were established, and cited a hundred instances of commodities upon which alternative rates and minimum weights were applicable.

The Commission found that there was no necessity for the prescription of alternative rates on popcorn or for establishing a lower rate on a 60,000-lb. carload minimum than the existing rate on the 40,000-lb. minimum. The complaint was dismissed. It stated in commenting upon this proposal: "Generally, we are urged to prescribe alternative rates because of the necessities of small dealers and trade conditions. . . . Although in a few special instances we have prescribed alternative minima and rates, we have repeatedly said that it has not been our policy to prescribe alternative rates based on different minima."[4]

In *Twin Coach Corp. et al v. B. & O. R. Co. et al.* the Commission found the rates from Kent, Ohio, to points in Transcontinental Territory on automobile buses, twin coaches, as vehicles, self-propelled, subject to a carload minimum of 10,000 lb., applicable and not unreasonable or unduly preferential despite rates on street passenger cars or car bodies with or without equipment of motors upon two bases—one subject to 20,000 lb. and the other lower rate on the basis of 30,000 lb., carload minimum weights. The Commission referred to other cases in which it had refused to prescribe alternative rate bases and carload minimum weights and stated that it was not its policy to encourage such rates. "A shipper should pay a reasonable charge per car regardless of how it is arrived at."[5]

In *Rosenbaum v. Alton R. Co., et al.* the complainant, a jobber, asked the Commission to prescribe two lines of rates on scrap iron and steel in Western and Southwestern Territories and between these territories and other territories. One set of rates was requested to be based upon 15 per cent of first class rates, subject to a carload minimum weight of 50,000 lb., and the other was requested to be based upon 12½ per cent of first class, carload minimum weight 75,000 lb., the rates to be applied alternatively. The complainant did not claim inability to market all of its scrap iron; the disability was confined to lower grades of scrap which constituted a relatively small percentage of its total shipments[6]. The Commission, in dismissing the complaint, found the rates on a single carload minimum weight not to have been or not to be unreasonable. It stated: "Certainly there is no justification on this record to warranting a lower basis of rates on this low-grade scrap than on other scrap iron."[7]

A single carload minimum weight and a single level of rates was found reasonable by the Commission in *Newport News S. B. and D. D. Co. v. B. & O. R. Co. et al.* decided by Division 3 of the Commission in 1929;[8] and in a number of other cases involving rates on scrap iron and steel, including *Midvale Co. v. W. & L. E. R. Co. et al.*;[9] *M. Glosser and Sons v. B. & O. R. Co., et al.*;[10] and *M. Glosser and Sons v. C. & O. R. Co., et al.*[11]

Lawfulness of Alternative Rates

In the cases in which the Commission has considered the lawfulness of alternative rates based upon different carload minimum weights, it has generally held such rates to be violative of the Interstate Commerce Act, as discriminatory against small shippers or consignees, unless the differences in rates were justified by differences in costs of performing the transportation services.

In the Matter of Container Service in 1931, the Commission refused to approve the proposed rates on shipments in container car service because they would be unjustly discriminatory and unduly preferential, in the opinion of the majority of the Commission. It interpreted Section 2 of the Interstate Commerce Act, as construed by the United States Supreme Court, as prohibiting the Commission from approving varying rates based on the weight of the lading offered for container shipments except "upon a record which establishes that charges so determined are warranted by differences in the cost and quality of the service."[12] It found the record in this case devoid of such evidence, and the carriers disclaimed any intention of justification of the rates upon this ground.

In his partly concurring separate opinion in this case, Commissioner Eastman disagreed with the majority on this interpretation of the law as forbidding rate differences dependent upon the loading of the container. "It is said that the respondents (the carriers) 'concede that differences of this character are not based upon differences in cost or character of service.' I do not understand

[2] (101 ICC 273, 274), 1925.

[3] *Mathieson Alkali Works v. L. & N. R. Co., et al.* (153 ICC 784, 789), 1929.

[4] *American Popcorn Co. v. A. T. & S. F. R. Co., et al.* (182 ICC 230, 231, 232), 1932.

[5] *Twin Coach Company, et al. v. B. & O. R. Co., et al.* (177 ICC 609), 1931.

[6] *J. Rosenbaum and Son v. Alton R. Co., et al.* (232 ICC 103), 1939.

[7] Ibid, (232 ICC 103, 105), 1939.

[8] *Newport News Shipbuilding & Dry Dock Co. v. B. & O. R. Co., et al.* (160 ICC 620), 1929.

[9] *Midvale Co. v. W. & L. E. R. Co., et al.* (220 ICC 390), 1937; (229 ICC 57), 1938; (231 ICC 734), 1939.

[10] *M. Glosser & Sons v. B. & O. R. Co., et al.* (229 ICC 87), 1938.

[11] *M. Glosser & Sons v. C. & O. R. Co., et al.* (229 ICC 87), 1938.

[12] *In the Matter of Container Service,* (173 ICC 377, 443, 444), 1931.

that they so concede, but if they do they are in error, for unless I wholly misconceive the facts, differences in cost of transportation inevitably attend differences in loading. The situation is like that which exists in the case of carloadings. It is recognized that the cost per 100 lb. of freight handled is less when a car is loaded with 100,000 lb. than when it is loaded with 50,000 lb.; in other words, that the unit cost constantly decreases as the car loading increases. It is for this very reason that we fix relatively lower freight rates for heavy-loading than for light-loading commodities. If a container is loaded with 8,000 lb. of freight, the cost of transportation per 100 lb. is bound to be lower than if it is loaded with 4,000 lb.

"The conclusion reached by the majority with respect to Section 2 is, therefore, based upon a misapprehension of the facts. There is a difference in unit cost of transportation, dependent upon differences in container loading, and differences in rates which are fairly related to these differences in cost are not unlawful under Section 2."[13]

In the supplemental report in this case in 1932, the Commission stated that it had found the proposed rates in the *Container Case* to be unlawful because they threw an unnecessary burden upon other traffic and were unjustly discriminatory and unduly prejudicial.[14] The record in the supplemental case, dealing with the "ferry-truck" rates of the Chicago, North Shore & Milwaukee between Chicago and Racine and Milwaukee, was found by the Commission to show that the proposed rates were not so low as to throw an unnecessary burden on other traffic, and no lower than necessary to meet successfully increasingly severe motor-truck competition. The Commission also found that the record in the supplemental case established that the proposed charges were warranted by differences in the cost and quality of the service. No shipper or localities appeared to object to the proposed different rates upon alternative minimum weights, and, although these different rates and minimum weights were in effect for four years, no objection to the alternative nature of the charges on this traffic appeared on record.

The second and concluding part of this article will appear in next week's RAILWAY AGE.

[13] Ibid. (173 ICC 377, 448, 449), 1931.

[14] *In the Matter of Container Service,* (182 ICC 853), 1932.

Self-Improvement Program

The Boston & Maine R. R. Y. M. C. A. approaches study courses and forum from a new angle

AS a further development following the two successful discussion courses on Railroad Human and Industrial Relations and Know Your Railroad, which were conducted on the Boston & Maine last fall and this spring, the Boston & Maine Railroad Y. M. C. A. at Boston, in co-operation with the Division of University Extension of the Massachusetts Department of Education, the Standard Railroad Labor Organizations and the management of the railroad, is presenting a somewhat different and more extensive program for next season, beginning in October. Several self-improvement courses will be conducted with limited enrollments and under expert instruction; a forum for public affairs, with outstanding leaders, will also meet once a month. State certificates will be awarded for the successful completion of these courses; enrollment is already under way. The following courses will be offered.

Speaking in Public.—The purpose of this course will be to enable one to speak in public confidently, correctly and interestingly. Instruction will be given in the fundamental techniques of clear diction, correct pronunciation and voice control. Speed flaws will be corrected.

Eight meetings will be held on Thursday evenings from 6:15 to 8:15 p. m., beginning October 4. The instructor will be Francis X. Rooney, M. A., University Extension instructor in public speaking. The enrollment will be limited to 30 and the fee will be $3.

Art of Straight Thinking.—In modern life the ability to think straight and to appraise critically the speech of others is absolutely necessary. By practical examples, rather than by rules alone, the student will learn how to avoid offering or accepting fallacious arguments and will also learn the methods used by scientists, judges, statisticians and other investigators, in aiming at their decisions. The course will draw its subject matter from psychology, science of logic, science of language and the history of thought.

Eight meetings will be held on Friday evenings, 6:15 to 8:15 p. m., beginning October 5. The instructor will be Harry M. Doyle, Ph. D., professor of history and government at Boston College. The fee will be $3.

Personality Improvement. — This course is especially designed for women, who will be taught how to develop personality in the light of recent psychological research. Following are some of the topics that will be discussed: Fundamentals of mental and physical health; realizing one's potentialities and developing them; perfect posture; movement with distinction; pleasurable exercise and calorie control; relaxation and recreation; care of body, skin and hair; secret of poise, quality of voice, mannerisms, conversation; the art of graciousness; self-confidence; obliterating the complex "inferior"; developing a sense of humor; needful adjustment to business and social conditions; fashion psychology and the importance of color; dressing to type and appropriately for occasion; making the most of oneself; attracting and holding the people one likes.

This will be an eight-week course, meeting on Monday evenings, 5:30 to 7:00 p. m., beginning October 1. The instructor will be Mrs. Maud Preston Gregson, formerly associated with the House of Worth and Harrod's, Ltd., London, and Couturier Salons, Paris; and formerly buyer, Boston Specialty Shops.

Elementary Public Relations for Railroaders.—Some of the objectives of this course will be to acquaint employees with the facilities and service offered by the railroads, the magnitude of the operations and the importance of "selling your railroad" in daily contacts with the public, both on and off the job. The enrollment in this class will be limited to 12 members in a section, and sections will meet in the morning, afternoon or evening, to suit the convenience of the students. The course will extend over six weeks and there will be no charge for it, since it is sponsored by the state and federal governments. The meetings will extend over two-hour periods and will be held on Wednesdays. The instructor will be John F. Shea, supervisor in the War Production Training Division of Vocational Education, Massachusetts Department of Education.

Forum on Public Affairs.—Six forums will be held on the third Tuesday of each month (6:15 to 8:15 p. m.), extending from October to April inclusive, but excluding December. Outstanding speakers who are specialists in each field will present the topics. A question and discussion period will follow each lecture. The topics will be: The interdependence of industry and railroading; the individual's responsibility in a democracy; the present European situation; Russia's place in the world; the stabilization of railroad employment; and religion in the post-war world.

The fee for the course will be $2, except that no charge will be made for those taking any one of the first three study courses listed above.

The classes dealing with elementary public relations are somewhat in line with the "Know Your Railroad" discussion course, held early this year, except that it is primarily a study course. The courses on speaking in public, the art of straight thinking, and personality improvement, grew out of many suggestions that were made for special instruction in these matters. The earlier forum type of meetings is retained in the monthly public affairs discussions.

Cultivating the War-Time Traveler

RAILROAD MEN — PASSENGERS

AWARE that current travel annoyances are hard on everyone, the Chicago, Burlington & Quincy, in advertisements, posters and amusingly-illustrated booklets has been attempting for some time to secure public understanding of some of the essential facts about war-time railroad operation—reasoning that where there is understanding of the railroads' problem, the public will judge railroad service in relation to the difficulties of providing it, rather than by comparison to peace-time standards of good service.

The Burlington is now going to all its personnel with a parallel message—seeking to induce employees to be sympathetic with the patrons' difficulties as it hopes the patrons may be with those of the railroad's staff. Employees are reminded of the need for making travelers feel "really at home" on its lines. And, in stressing the desirability of "good service, courtesy and pleasant efficiency," the road emphasizes that whether at train gates, ticket windows or on trains, every railroader leaves an impression with every traveler. "Good, bad or indifferent," the sum total "spells Burlington" to the traveling public.

Lest the post-war business man head for the airlines, and the family return to its automobile for vacations, the Burlington management urges constant mindfulness to courtesy. If patrons get good service now, the railroad believes, even when they have a choice of other modes of travel, many present customers will be coming back to the trains.

Putting its case before all personnel in a completely amiable little booklet (a number of drawings from which are reproduced herewith), the Burlington observes that "one unpleasant incident is talked about longer" by a traveler "than a thousand pleasant or uneventful trips."

And there is the reminder that such incidents are pretty apt to occur with "a busy, nervous, tired or sad" war-time public. Naturally, the road points out, we can't "spit in their eye," or even be "a little curt or too busy to do helpful things to ease their war-time journey." Because, as this railroad sees it, "they are the people who will keep our engines rolling, our passenger cars filled, our jobs secure in the world that's coming."

Enlarging upon the thought of the traveler of tomorrow, the booklet points to the current public—the young mothers with babies, the passengers who never before were inside a train, to the "big shot" in an upper "dreaming about the bedroom in the next car." "While right now we wouldn't miss them if some of these passengers stayed home . . . when we get out new Zephyrs, when we are able to put more fun back into travel, we'll be mighty glad to see them," says the Burlington. "In fact," it adds, "we shall need them, if our investments and our jobs are to be secure."

This is but one angle of the Burlington's comprehensive public relations program. Here is still another: Nearly 8,000 of its employees are in the armed services, and last year a Christmas package containing greetings from President Ralph Budd was sent to all whose addresses were known. Since then the railroad has received hundreds of spontaneous replies from its servicemen, and in another illustrated booklet distributed by the railroad a few of these letters are reproduced. From France, Holland, Saipan, Kwajalein, India and Iran come the thanks and other friendly expressions of the former railroaders that the C. B. & Q. is doing its part to the fullest extent to speed their return home. Nostalgia for the C. B. & Q. is plain in the letter from Pvt. Angelo J. Bellenttini (here pictured in a fox-hole) a former section worker at Leland, Ill., who wrote from Europe: "I would appreciate it very much if you would forward me a time-table at your convenience. One doesn't have much to do over here for recreation and I get a big kick out of looking over a timetable and recollecting fond memories. It would also tend to bring me closer to my friends and job."

New Hump Yard Speeds War Traffic

Conversion of flat-switching layout of the Burlington at Lincoln, Neb., to one of gravity type, together with other improvements at this point, cuts delays and speeds car movements generally

FOR the purpose of augmenting its capacity and efficiency for handling war-time traffic, especially the increased westbound movement now under way in the final phase of the struggle, the Chicago, Burlington & Quincy has undertaken and is now completing extensive improvements at its freight classification yard at Lincoln, Neb., which will involve a total cost of more than $1,660,000. The improved facilities, most of which have been in service for some time, have had the anticipated effect of greatly increasing the capacity and efficiency of this important yard.

Briefly, the improvements that have been made consist of the conversion of a flat-switching yard into modern, gravity hump-type classification yard, with power-operated car retarders and switches and a modern communication system; the lengthening of both eastbound and westbound receiving and departure tracks; the relocation of the existing car-repair facilities; and the construction of a number of modern buildings, together with many other minor changes. An outstanding feature of the work was the fact that it was all done under traffic during a period when this yard was handling the largest volume of traffic in its history. As different aspects of the project were completed the improved facilities were placed in service, with the result that there was a gradual improvement in the efficiency of the yard as the work progressed.

Lincoln a Hub

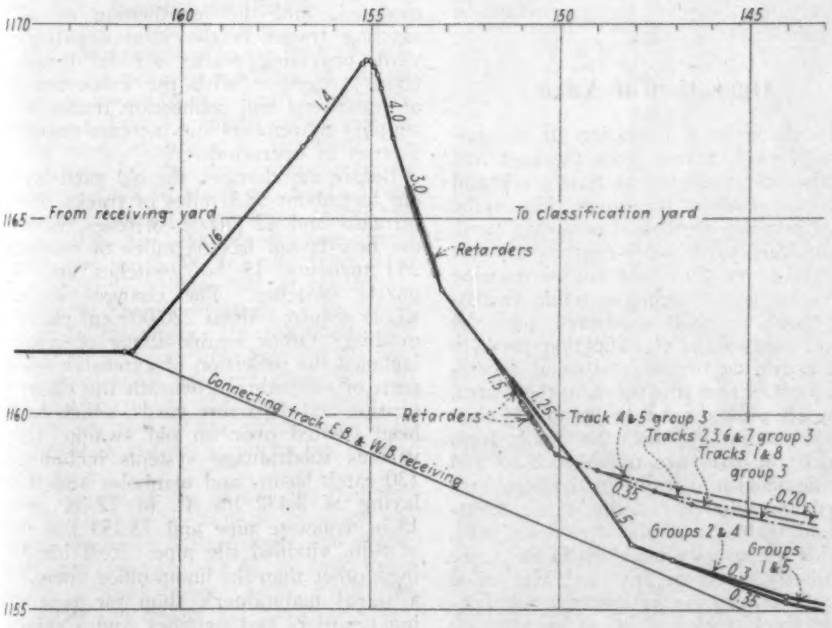
Lincoln is an important hub of the Western lines of the Burlington, and numerous important cities and junctions are located on the various lines that converge at this point. Through Lincoln extend the main line between Chicago and Denver, Colo., and also the main line from St. Louis and Kansas City, Mo., to Alliance, Neb., and Billings, Mont. In addition, a number of secondary lines radiate from Lincoln, including one to Nebraska City, Neb., one to Wymore, Neb., another to Columbus, Neb., and still another to Sioux City, Iowa.

Because of the railway lines radiating from Lincoln, it is a very important terminal. Practically all Burlington freight passing through it is reclassified. In October, 1941, the road handled a total of 91,269 cars through this point. In October, 1942, this had increased to 120,954 cars, and in October, 1944, it rose still further to 136,817 cars. Probably the record day was October 23, 1944, when 5,004 cars were handled.

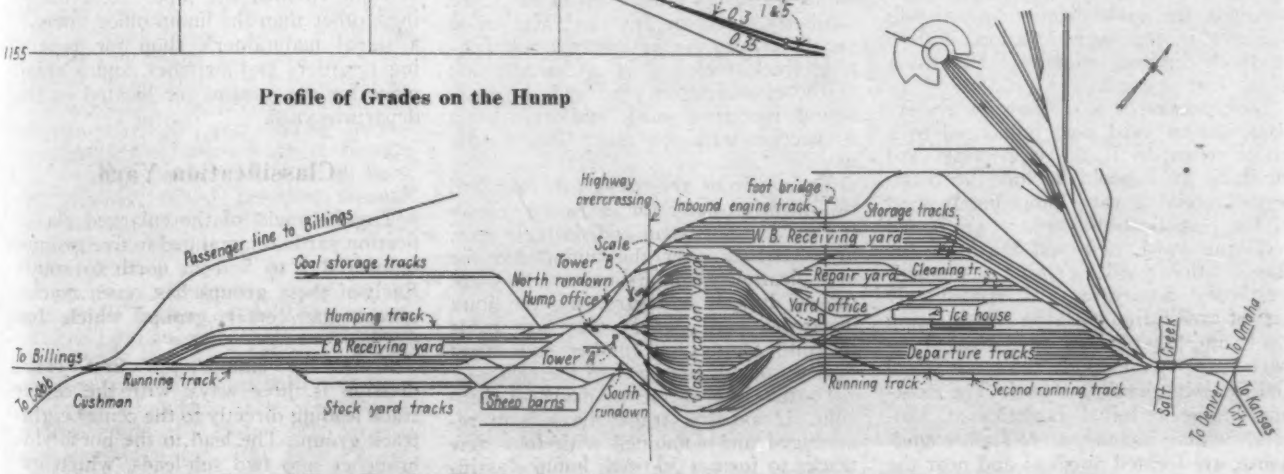
As a result of the improvements the movement of this traffic through Lincoln has been greatly expedited and substantial savings are being realized. Under present traffic conditions a total saving of approximately 400 car-days per day are being effected at Lincoln and other points, and the average time between the arrival and departure of all trains has been greatly reduced. On this basis it is estimated that 144,000 car-days are being saved annually. To this must be added substantial savings in locomotive-hours on line, which are being effected due to the fact that the additional classifications permitted have reduced the amount of switching required en route. As a result of the im-

View of the Classification Yard, Looking East from a Point Near the Hump Office

Interior of the Control Room of Tower B Showing the Control Machines and Teletype



Profile of Grades on the Hump



General Plan, Showing Relative Locations of the Improved Yard Facilities at Lincoln

provements the number of classifications permitted at the yard has been doubled as compared with the previous facilities.

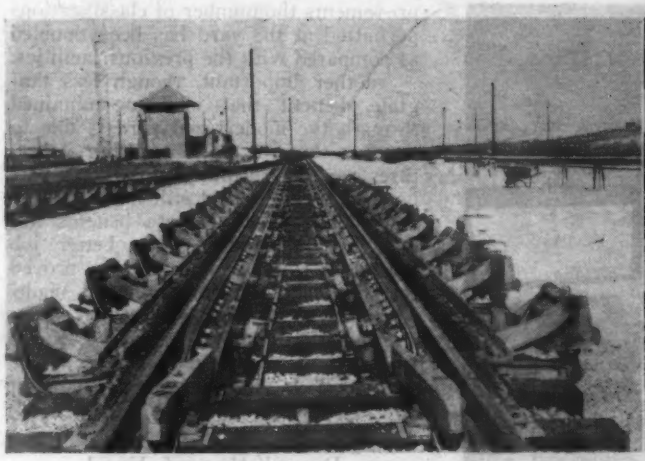
Another important, though less tangible, benefit that is being obtained through the modernized yard is due to the fact that the present earlier departures permit scheduled trains to handle heavier tonnages and still make desired connections. All of these benefits are enabling the road to do a better job with less equipment, and have proved the wisdom of the improvements made. Furthermore, as the rising tempo of the war in the Pacific causes westbound traffic through Lincoln to increase, these new facilities will undoubtedly prove of still greater value.

Description of Yard

Lincoln yard is located about two miles west of the city and extends in an east and west direction. The yard is entered at the east end by two tracks on a bridge over Salt creek, and extends three miles to Cushman, Neb., at its west end. All freight trains to and from Chicago, Omaha, St. Louis and Kansas City enter or leave the yard at Salt creek, and all freight trains to and from the lines to Denver and Billings enter and leave the yard at Cushman.

The original designs for the Lincoln yard in 1905 called for a hump in each direction (eastbound and westbound), using riders. About 18 classification tracks for each direction were planned. However, the westbound hump was not constructed, and the eastbound hump was done away with more than 20 years ago. Before the present improvements were undertaken there were approximately 20 tracks serving the westbound yard and about the same number for the eastbound movement. In addition, a number of other tracks served both yards.

Because of the arrangement of the yard many car-days were lost due to the time required to switch cars received in the westbound yard that were destined to leave from the eastbound yard. This also applied to cars arriving in the eastbound yard that had to be moved to the



Close-Up of Retarders on Lead to Classification Tracks in Group 4

Close-Up of One of the Direct-Acting Electro-Pneumatic Switch Machines in the Classification Yard

westbound yard for departure. In addition, the layout was such that engines moving between westbound trains and the enginehouse and coal chute had to follow a circuitous route that caused overtime and extra engine-hours. Finally, the car repair yard was located at the extreme east end of the freight yard, with the result that serious delays were involved in handling cars requiring repairs en route.

In the improved layout cars for all directions are handled in one classification yard, thereby making it possible quickly to assemble cars received from the different directions for their various destinations. As a consequence there is a wide difference between the operation of the improved yard as compared with the previous facility.

In approaching the problem of improving and expanding the yard facilities at Lincoln to handle the increasing volume of war traffic, a number of considerations had to be kept in mind. For instance, to lengthen the yard to the east over Salt creek, or to the west beyond Cushman, presented certain obstacles, together with the prospect of costly auxiliary construction. Because of these and other factors it was decided to enlarge the existing facilities as necessary to handle the increased traffic. As rebuilt, therefore, the yard represents substantially the modernization of existing facilities in the same location, with a relatively limited amount of expansion to the east or west.

Built around a new one-way gravity classification yard, and influenced to a major extent by it, the supporting yard facilities at Lincoln include an eastbound receiving yard, immediately west of the classification yard, a westbound receiving yard, east and north of the classification yard; a joint eastbound-westbound departure yard, immediately east of and in line with the classification yard; and a car repair yard located between the westbound receiving yard and the joint departure yard. The existing engine terminal facilities at Lincoln, which include a 43-stall roundhouse, are located north of and near the east end of the yard layout as a whole.

With this layout of facilities, it is evident that through the straight-line operation afforded eastbound cars, maximum efficiency obtains in the handling of cars in that direction. However, even though the classification of westward cars calls for a reverse movement through the classification yard, the advantages gained in speed of handling and in increased trackage, provide adequately for the war-time movements in that direction.

Operation of Yard

In the general operation of the improved yard, trains from the east and south enter the yard at Salt creek and move west along the north side of the yard into the westbound receiving yard. From this yard, road engines are cut off and move via a new engine running track to the enginehouse, while switchers move the cars westward, past the north side of the classification yard, to the northside of the eastbound receiving yard. From this point, in their turn, they are pushed over the hump and classified in the classification yard, from which the cars are moved out to and reassembled into trains in the departure yard immediately to the east. Westbound trains from the departure yard, which are usually made up in the more southerly tracks of this yard, are pulled out directly to the west over a new running track, which skirts the south side of the classification yard and the eastbound receiving yard, and has direct connection with the main lines to the west.

Trains from the west for eastward classification enter the eastward receiving yard at Cushman and, in their turn, are classified over the hump into the classification yard. From here they are moved directly eastward into the joint departure yard, where they are made up into trains for further movement directly out of the yard to the east.

In the improvements made at Lincoln, 32 existing tracks have been rearranged and combined with four new tracks to form a 36-track hump classification yard, provided with car retarders, power switches, two control towers, a hump office, floodlights and communication systems. Other improvements included the construction of three new long tracks in the westbound receiving yard; the relocation of the car-repair yard; the lengthening of four existing tracks in the eastbound receiving yard to the limit of the space available, permitting full-length trains to be accommodated; and the lengthening of all existing tracks in the joint departure yard, providing tracks for full-length trains; together with the constructon of runaround and connection tracks, to simplify movements and increase the efficiency of operations.

Before the changes, the old yard layout had about 58.5 miles of tracks, 208 turnouts and 12 puzzle switches, while the new layout has 65 miles of tracks, 269 turnouts, 15 lap switches and 5 puzzle switches. The changes as a whole required about 220,000 cu. yd. of grading. Other sizable items of work included the provision of extensive systems of subdrainage beneath the classification and departure yards, which had been located over an old swamp, the various subdrainage systems including 130 catch basins and manholes and the laying of 3,432 lin. ft. of 12-in. and 18-in. concrete pipe and 13,353 lin. ft. of 8-in. vitrified tile pipe. New buildings, other than the hump office, include a signal maintainer's shop for repairing retarders and switches, and a small office for the yardmaster located in the departure yard.

Classification Yard

The 36 tracks of the enlarged classification yard are arranged in five groups, numbered 1 to 5 from north to south. Each of these groups has seven tracks, except the center group, which has eight.

From the hump, the first track division is three ways, with the center track leading directly to the center eight-track group. The lead to the north side branches into two sub-leads, which extend to Groups 1 and 2. Similarly, the

lead to the south branches into two subleads serving Groups 4 and 5.

In the car retarder layout, a double retarder, consisting of two sections, each 38 ft. long, is located on the single track down the hump; a single retarder, 38 ft. long, is located on each of the two side leads of the three-way split; and a double retarder is located on each of the leads immediately ahead of each group of tracks. Thus, the yard includes six double and two single retarders, or a total of 14 sections. Cars passing from the hump to the tracks in Groups 1, 2, 4 and 5 pass over five retarder sections, while cars to the tracks in Group 3 pass over four retarder sections. The reduced amount of retardation required for the center group is explained by the fact that it is closer to the hump, resulting in its being about two feet higher than the other groups.

To secure the utmost capacity in the tracks in the classification yard, and also to get the clearance points as close to the last retarders as possible, bearing in mind the curvature considerations, No. 9 and No. 11 lap switches are used, with the switch points 30 ft. apart. All of the turnouts have self-guarded frogs.

Grades in Yard

The humping tracks are long enough, and the grades on and height of the hump were so planned that a hump engine can hump a full train at a time. The track elevation at Cushman, the west end of the eastbound receiving yard, is 1,172 ft. above sea level. From this point east, the receiving tracks are on a 0.20 per cent descending grade eastward for 5,000 ft., and then level for 1,600 ft., to the foot of the hump, which is at an elevation 11 ft. lower than at Cushman. Up the hump the grade is 1.16 per cent for 540 ft., followed by a 1.4 per cent grade for 150 ft., which makes the crest only 8 ft. above the foot of the grade, and 3 ft. lower than the west end of the receiving yard.

A feature of the yard is the fact that grades on the descending side of the hump and into the receiving end of the classification yard are lighter than those used in most hump yards. From the crest of the hump, the grade is 4 per cent for 70 ft., then 3 per cent for 130 ft., through the first retarder. From the leaving end of this retarder, to the last retarder in the lead to each of Groups 1, 2, 4 and 5, the grade is 1.25 per cent, with a grade of 1.5 per cent through the retarder. The grades in the lead to Group 3 are slightly greater.

After leaving the last retarder in the lead to each group, the grade in the yard proper flattens out to 0.35 per cent, followed by 0.2 per cent to a point about the middle of the yard. Beyond this point the tracks are level until near their extreme ends, where they have an ascending grade of 0.75 per cent to help bring cars to a stop. Rail skates at the ends of these tracks prevent cars from running out of the yard.

The Lincoln hump has grades very nearly the same as those of the hump serving the eastbound classification yard of the Burlington at Galesburg, Ill., where it has been shown that lighter grades, designed to keep cars moving at all times at a speed of 5 m.p.h., or less, are desirable in the interest of less retarder wear, less headway between cars, and better control of car speed, resulting in less likelihood of damage to car contents.

Switches, Retarders, Signals

The retarders and power switch machines in the classification yard are of the direct-acting, electro-pneumatic type. The yard signals are of the search-light type. The hump signal, faced toward the eastbound receiving yard, has five indications: stop, hump slowly, hump medium, hump fast and back up. Trimmer movements in the classification yard are controlled by five trimmer signals, one mounted on the back of the hump signal, one on a mast near the base of the hump, and three on the east side of a viaduct across the middle of the yard. The aspects and indications of these signals are: Red—Engines in classification yard must remain in the clear—humping is proceeding; Green—Engines in classification yard may enter lead—humping has stopped.

Two new two-story control towers in the classification yard—Tower A and B—control the power switches and retarders. These towers are of fireproof construction, with concrete floors and brick walls. Tower A is 14 ft. 6 in. by 13 ft. 6 in. in plan, and Tower B 16 ft. by 16 ft. 8 in. The height of both towers, from the lower floor to roof, is 22 ft. 4 in., and the ceiling height of the first floor is 14 ft. 4 in. The first floor is divided into two rooms, one containing the heating plant, and the other

Humping at Night. The Controller for the Hump Signals Can Be Seen in the Hump Office at the Right

the signal apparatus, relays, batteries and charging equipment. Independent outside doors are provided for these rooms, and they are separated by a solid wall, extending to the ceiling to prevent dust from entering the equipment room.

The second story of each tower contains the control machine, a teletype machine, telephones and toilet facilities. This area has large windows providing wide unobstructed vision for the operators, large overhanging roof eaves, and heat-absorbing, glare-reducing window glass. For night illumination of the control room, when general illumination is desired, it is equipped with a 200-watt indoor-type ceiling fixture. In addition, adjustable amber spotlights are provided for illuminating the immediate working areas of the operators and their switching lists.

The control machine in Tower A controls the switches of the first divide, the double retarder on the hump track, the two single retarders on each outside track after the divide, and the first switch leading out of each of the outside tracks. This machine has 8 panels, with a total of 4 retarder levers, 4 switch levers, and 8 track indicators.

The machine in Tower B controls 5 double retarders, the switches leading to the different groups of tracks, and the switches leading from the yard. This control machine has 16 panels with 10 retarder levers, 33 switch levers, 3 signal levers, 66 track indications, 10 signal repeater indications, and 1 master controller lever. The machine in Tower A is controlled by one operator, while that in Tower B is controlled by two operators. However, the layout as a whole is such that, in case business declines the hump can be operated by one operator in each tower.

Yard Communication

The new facilities include a one-way inductive-type telephone communication system, by means of which the humpmaster, in his office at the crest of the hump, can talk to the engineman of the hump engines, as well as to those of the switchers used for trimming. The voice of the humpmaster is reproduced in the cab of each locomotive by a loudspeaker. Normally, a green light in the cab is an indication to the engineman that the system is in service.

The waybills for incoming cars are assembled in a main yard office, near the center of the yard, where the switching lists are prepared. A teletype sending machine in this office operates in conjunction with teletype receiving machines in each of the two control towers, thereby reproducing the switching lists in these towers. For instant communication, a special telephone circuit, with transmitters and loudspeakers, is provided in each of the two towers, in the humpmaster's office at the hump, and in the general yard office.

Compressed air for the operation of the retarders, switch machines and whistles is furnished from the yard enginehouse through 4-in. and 3-in. air lines, but, for emergency stand-by service, a gasoline-engine-powered compressor is located in the new signal shop near the classification yard. All power switches are served by air lines, equipped with lengths of flexible hose and nozzles, to permit the blowing of snow from these switches during the winter when occasion may require.

The repair yard is about 2,000 ft. long by 200 ft. wide and holds approximately 152 cars spaced 10 ft. apart. This yard has more than a mile of concrete driveways, approximately 13 feet wide, to permit the delivery of repair parts and materials directly to the cars. Facilities at this yard include a journal-lathe shop, a garage, a two-story storehouse, a boiler and coal room, a tool room, an oil and waste room, a lumber shed, lumber mill, air brake shop, paint shop, and a blacksmith and welding shop. It also has two depressed tracks for unloading car wheels and for loading rubbish. The entire yard is equipped for illumination at night by seven floodlight towers, including two, 110 ft. high; three, 80 ft. high; and two, 60 ft. high. Each of these towers has 42 floodlight projectors, each equipped with a 1500-watt bulb.

Construction Problems

Because the old yard had to be kept in operation while the new yard was being built, careful planning was necessary to prevent interference with traffic.

Accordingly, a master plan was drawn up to show the work to be done and the order of doing it, which was modified only from time to time as local conditions required. Excellent co-operation between the operating and engineering departments and the contractor resulted in the work being carried out with a minimum of interference with the heavy movement of traffic through the yard at the time.

All the switches and running and connection tracks within the yard area were laid with 90- or 100-lb. rail, except the hump track and the classification lead tracks and switches, which were laid with new 112-lb. rail to clearance points. The remainder of the yard tracks were laid with second-hand 90-lb. or 85-lb. rail. The grading was started on June 16, 1943, and all the work described in the foregoing has now been completed.

In addition to the improvements described, a contract has been awarded for the installation of a pneumatic tube communication system from the yard office to the extreme east and west ends of the yard. This tube system will terminate in two-story control towers to be built for controlling power switches to be installed at these points. Hence, trains from any direction will be able to pull into the yard without delays and can deliver their waybills to the yard office almost immediately. Furthermore, departing trains to the east and south will be able to receive orders at the east-end tower and to depart without delay. In addition, a new concrete and brick yard office is under construction near the site of the present frame yard office building.

The improvements at Lincoln were carried out under the general direction of H. R. Clarke, chief engineer, Burlington Lines, Chicago, assisted by R. W. Willis, principal assistant engineer, who was in charge of the preparation of plans. Baron Laubenfels, at the time construction engineer, and now division engineer at Burlington, Iowa, was in charge in the field, and worked closely with F. E. Haines, general superintendent at Lincoln, in executing the work without interfering with yard operations.

The grading work was done by the Garetson and Knisley Construction Company, Douglas, Wyo.; the track laying and ballasting by Longwill-Scott, Inc., St. Louis, Mo.; and the building construction by the W. J. Assenmacher Company, Lincoln, Neb. Installation of the signaling was under the direction of W. F. Zane, signal engineer, which work, and including that of installing the communication system, electrical work and the air lines, was done by Burlington forces.

HEADQUARTERS, TRANSPORTATION CORPS, PARIS.—The 708th Railway Grand Division, while in support of the American First and Ninth armies during a 24-hr. period, on March 22, hauled 29,788 net tons of freight in 2,342 railway cars. In addition this division handled three passenger equipment trains, 8 troop trains, 2 prisoner-of-war trains and 31 empty freight trains of 975 cars.

* * *

C. P. R. Photo

Check Your Coat, Sir?

A check room for hats and coats and shelves for hand luggage at the entrance to the cafe-parlor car recently renovated and put into service on the Canadian Pacific's Kettle Valley run between Penticton, B. C., and Calgary, Alta., eliminate the old baggage racks and clothes hooks formerly placed throughout the car—Seating 14 in the parlor end and 18 in the dining section, the car, the first of three scheduled for this service, has been completely modernized, air-conditioned and fitted with observation-type windows at the C. P. R.'s Angus shops, Montreal

Consolidation Is a Normal Process

Report of subcommittee of A. A. R. Committee for the Study of Transportation surveys evolution of existing systems and predicts natural voluntary mergers will go on

WASHINGTON, D. C.

A PROPOSAL that railroads "continue to pursue a policy of consolidation along natural and evolutionary lines, subject to the safeguards provided in the Interstate Commerce Act," is the principal recommendation of the Subcommittee on Consolidations of the Railroad Committee for the Study of Transportation in its recently-completed 93-page report, which is another in the series of studies undertaken in the comprehensive research program of the railroad industry which has been actively under way for the past three years under the leadership of Judge R. V. Fletcher, vice-president-research of the Association of American Railroads.

The recommendation that consolidations should "continue" carries with it the implication that the railway systems now functioning have been formed by consolidations of many smaller companies, and a substantial part of the subcommittee's report is devoted to a review of the progress that already has been made in reducing to a comparatively limited number of railroads the several thousand separately organized, built, and operated lines that have existed in the 110-year span of American railroad history.

This 110-year period, the subcommittee points out in its comment introducing the report, may be divided roughly into two segments—a 60-year interval in which many consolidations were brought about "under the romantic play of rugged individualism," and the following 50 years of government "inquiry, direction and control," in which "comparatively little in the way of new final consolidations was accomplished compared with the previous period," despite the fact that Congress, some 25 years ago, formally adopted a national policy intended to facilitate consolidations into a limited number of systems.

Statute Retarded Integration

Interest in the subject of railroad consolidation was more intense around the time of the passage of the Transportation Act of 1920, the subcommittee observes, than it has been recently. Under that law the Interstate Commerce Commission's complete plan of consolidations was formulated, but some of the conditions imposed on the commission by the statute "were found to be incompatible with the purposes sought to be accomplished," and consolidation of railroads into a limited number of strong systems actually was retarded, even though some of the limiting conditions later were removed by amendments to the act. Nevertheless, the comment continues, "integration of railroad operations through some form of consolidation" has gone on since 1920 "in much greater degree than is generally realized."

Some Progress

Disregarding what has been accomplished during the war years, consolidation of railroads had progressed by 1940 to the point where 20 railroads with 38 associated companies, making up "systems" according to I. C. C. terminology, earned 80 per cent of the total Class I revenues. Even while the restrictive conditions imposed by the 1920 law were operative, the trend toward consolidation continued, the statistics reveal. In 1920 there were 882 railroads reporting to the commission, as compared with 541 in 1940. Included among the 75 Class I roads not a part of the "systems" earning the bulk of the revenues were 9 that were parts of Canadian systems, 5 which were parts of the Missouri Pacific, in process of reorganization, and a number of bridge and feeder lines in which the "system" roads were financially interested. Thus the number of "independent" Class I carriers, not related to the "system" companies, was considerably less than 75 in 1940.

Nevertheless, the report points out, the progress that has been made falls short of the complete consolidation of all the railroads of the country into a limited number of systems which was contemplated by the 1920 statute, which was an expression of national policy adopted by Congress and a course the railroads themselves advocated. It is the subcommittee's conclusion that consolidation along natural lines, properly safeguarded, is in the interest of the carriers, their employees, and the public. "No miracles are to be anticipated, and possible economies are sometimes exaggerated in the public mind, particularly in the case of railroad systems which already are fairly well integrated," the report observes, "but potential economies are believed to be sufficiently substantial to justify further consolidation of railroads in certain instances."

Supplementing its recommendation that the railroads should continue the policy of consolidation, as circumstances permit, the subcommittee proposes two projects to the subcommittee on Legislation to facilitate such consolidations. First, it advocates enactment of laws to eliminate federal and state taxes which constitute a burden on the issuance of securities in connection with consolidations (proposing some revisions in the bill drafted in 1935 by the Federal Coordinator), and second, it asks for consideration of the advisability of seeking a statute authorizing acquisition of the shares of dissenting stockholders at a price to be fixed by the commission in proceedings where the commission has approved a consolidation or other integration of railroad properties.

The subcommittee which prepared the report is composed of C. E. Smith, vice-president of the New York, New Haven & Hartford, chairman; R. E. Dougherty, vice-president of the New York Central; J. V. B. Duer, assistant to vice-president of the Pennsylvania; Walter McFarland, assistant general counsel of the Chicago, Burlington & Quincy; and R. S. Marshall, senior vice-president of the Chesapeake & Ohio, Pere Marquette and New York, Chicago & St. Louis. It did not formulate a consolidation plan, allocating particular railroads to any specified number of systems, and points out that it had no authority to do so. Its report does discuss some of the plans that have been proposed by others, particularly the commission's 19-system plan of 1921, its 21-system plan of 1929, and its 1932 modification of the latter.

No "Plan" Suggested

Noting that the statutory requirement that the commission draft a plan for consolidating American railroads into a limited number of systems was eliminated in 1940, the subcommittee observes that "it is doubtful if any comprehensive plan could be prepared within a reasonable time. . . . The allocation of railroads to various systems, even aside from the question of conflicting interests, would be very difficult, requiring either knowledge of or a study of operating, traffic, financial, and commercial conditions on all railroads in the country. . . . On account of the inter-lacing of railroad lines, and the great number of railroads now in bankruptcy or receivership, it would be impossible to prepare a nation-wide plan which could be given active consideration in the near future. Even after determining the number and general outlines of railroad systems which would be desirable, it would be necessary to determine whether or not to endeavor to include other agencies of transportation and, if so, which ones. . . . The present law leaves to individual managements the initiation of plans for consolidation."

What the subcommittee has done, therefore, is to provide a historical and factual summary concerning the general subject of railroad consolidation, discussing the applicable laws, setting forth the advantages of and obstacles to large-scale consolidations, and generally reviewing the progress made in this direction as transportation facilities have been developed in the United States.

The desire to serve important towns or to have access to regions producing large tonnages of freight, inability to survive as independent short lines, the greater efficiency possible in large operating units, the inconvenience to the public, and its resulting complaints—these, the report notes, were some of the factors that brought about the elimination through the years of most of the 6,000-odd local and independent railroads that have existed in this country. If left to themselves, it adds, "no doubt the railroads gradually would have evolved a number of consolidated systems, created along natural lines in ordinary course of business. They were not permitted to do so, the obstacle, so far as the federal government is concerned, being interposed almost accidentally."

This "obstacle" was the Sherman Anti-trust Act, and more particularly the resulting Supreme Court decision in 1904 in the *Northern Securities* case. Further anti-trust legislation created additional obstacles to the acquisition of control by one railroad of another, until the 1920 act adopted consolidation as an element in the national transportation policy. While it might be supposed that this legislation would have furnished a great impetus to consolidation, and that "virtually all desirable consolidations" would have been consummated in the period of almost a quarter of a century that has elapsed since, "certain conditions combined to prevent this logical development," the report points out, and it goes on to outline some of them.

Progress Since 1920

In spite of these obstacles to continued progress in consolidation, 298 railroads which reported to the commission in 1920 had been eliminated by consolidation by 1940, including 60 Class I carriers, 104 in Class II, and 134 in Class III. "The consolidation problem, insofar as it relates to integrated or unified operation as distinguished from unified ownership," the subcommittee says, is presented by the "really independently owned and operated" Class I roads, not affiliated with "systems" recognized by the commission, which own probably not over 20 per cent of the total mileage and earn less than 20 per cent of the total revenue.

"Considering the progress that was made between 1920 and 1940 under the restrictions and conditions of the 1920 Transportation Act," the report observes, "further consolidation of railroads under the less restrictive conditions now applicable under the 1940 Transportation Act would not seem to be beyond the abilities of railroad management and the Interstate Commerce Commission, without additional legislation or controls."

Advantages

The report summarizes the advantages of consolidations under three general headings: operation, conduct of traffic relations and public regulations; and financial. Listed operating advantages include: Reduction of overhead expenses; greater utilization of most efficient routes and reduction of circuitous routing; better service resulting from more single-line movements and fewer interchanges; simplified joint arrangements at terminals; greater utilization of cars and engines and accelerated retirement of obsolete equipment; greater standardization of equipment and parts, resulting in economies in manufacture and maintenance; more efficient concentration of merchandise traffic; and abandonment of unnecessary lines. In the second category of advantages, the report names: Simpler, more uniform rate-making policies and tariffs; more effective competition between evenly-balanced systems; and easier regulation in the public interest resulting from more equal earning power and absorption of "weak lines."

Financial advantages itemized in the report are: More stable financial policies with less total capital requirements in the future; the number of security issues would be reduced and their characteristics better understood; railroad credit and marketability of their securities would improve because of better-balanced and better-maintained earning power of larger systems; additional funds could be more easily secured; crippling effects of local disasters would be absorbed in a large system; and savings in expenses and interest charges would be expected from a reduction in the number of companies.

Turning to the matter of objections to consolidations, the report notes that, while there is some expression of feeling that the supposed benefits of consolidation have been exaggerated, there is, aside from the views of groups personally concerned, little opposition to consolidation in principle, even though particular types of consolidations—compulsory adoption of a pre-determined plan, regional unification eliminating competition, and formation of one nation-wide system under either private or government operation, for example—may arouse strong objections.

There are to be considered, however, it continues, the specific objections directed to particular projects by those who believe they may be adversely affected. "Possibly the most effective opposition is that of railroad labor. In spite of the fact that the 1940 statute contains what was characterized at the time as 'a very fair and a very liberal provision for labor,' and that the statute is more advantageous to labor than was the Washington Agreement, the fact remains that the employees apparently will oppose any proposal involving a substantial displacement of labor. This opposition will also probably occur in spite of the fact that the problem will be eased substantially by retirements, deaths, changes in occupation and absorptions in other positions, coupled with the advantages of the Railroad Retirement and Unemployment Insurance Acts.

"Communities, manufacturers, merchants, etc., fear the loss or reduction in size of shops, general offices and railroad payrolls. Real estate men fear a decline in property values. The fact that many of these objections do not deal with the railroads as transportation agencies, makes the protests no less vigorous. Again, communities and shippers fear that they will be given branch line service, less frequent service, or a less advantageous rate adjustment, etc., if competition is reduced. Occasionally, competing railroads may oppose a course strengthening a competitor; and many short or weak lines may intervene in protest against a consolidation unless their lines are purchased.

"In practice, there is a tendency on the part of these diverse interests to stir up one another, and for all of them to seek political support, in the hope that opposition by state and municipal authorities will lend some standing to the claims that the particular consolidation involved will not 'be consistent with the public interest.'"

"Fear" of "Monopoly"

The report discusses at some length two questions associated with the general subject of railroad consolidation—(1) creation of a federal "planning agency" and (2) "integration" of other agencies of transportation with the railroad systems. On the first question, derived from the proposal of the "Committee of Six" in 1938 that a new and independent federal transportation board be created to exercise functions of a research or promotional nature, which would embrace consolidations, the subcommittee observed that, while it is not its function to pass on this general proposal, "it is not believed that such a planning agency could contribute anything very useful. On the contrary, the creation of an additional governmental office or officer, probably with rather vague duties, might complicate an already difficult subject."

On the subject of "integration," the view is expressed that, "although existing laws discriminate against the railroads, and there still is some fear, or alleged fear, of a 'railroad monopoly', the view of most informed students of the subject is that railroads should be permitted on equal terms to utilize other means of transportation, subject to appropriate determination by the regulatory body, after considering the particular project on its merits, that the proposed consolidation is consistent with the public interest. . . . The railroads should be given equality of opportunity with other carriers to continue to serve

the public by participation in all developments of transportation, whether on the rails, on the highways, in the air, or otherwise. Wide public and expert opinion favors the development of transportation companies as making possible the best and most efficient transportation service to the public."

Another section of the report reviews some of the arguments advanced for and against "compulsory," as compared to "voluntary," consolidation, and the relation of both to plans for "coordination" that stops short of consolidation. The subcommittee's conclusion is that compulsion "fairly bristles with difficulties," that the "natural approach is a gradual one, generally ripening into a full merger only after many years." "Coordination" of independently owned facilities, on the other hand, it observes, is helpful, but falls short of meeting the probable needs of the competitive post-war period.

"One of the principal problems which the railroads face after the war is the high level of costs," the report points out. "This problem, of course, will be faced by most industries and there will be a great striving to reduce costs in every direction. Industry will make every effort to reduce its transportation costs. The future of the railroad industry depends to a considerable extent upon its ability to so reduce its costs as to enable it to prosper under a level of rates which competition will force upon it together with the volume of traffic necessary to produce adequate revenues. Moreover, important savings lie in the field of necessary capital expenditures which the railroads must make to meet post-war conditions. These expenditures will be on a high cost level and there is more necessity than ever that they be concentrated to the very best advantage of the industry as a whole." Properly regulated voluntary consolidations along the lines of natural evolution are one means of reducing costs while maintaining high standards of service, the subcommittee's comments indicate.

COMMUNICATION . . .

Do the Railways Want College Men?

EUROPEAN THEATRE OF OPERATIONS

TO THE EDITOR:

Will you permit me, as a young railway engineer, to comment on the article entitled "Do the Railways Want College Men?" which appeared in your issue of April 21. The last paragraph of the article, referring to the conclusions of the committee states that "A careful reading of these comments will lead to the conclusion that there is needed a well-thought-out program of co-operative educational work, to be worked out between our committee and representatives of our leading engineering educational institutions; in all probability this could be accomplished by working with the Committee on Engineering Education of the American Society of Civil Engineers. The importance of this matter to the railways cannot be overemphasized."

After thoughtful study and restudy of the preceding paragraph of the article, I could not come to the same conclusion, and, I am of the firm opinion that the committee either wilfully or through lack of analytical study, as they suggest, missed the point which was clearly expressed.

The following quotations from the reports of the colleges give the logical and correct answer to the problem:

1. "For some reason, jobs in the engineering departments of the railroads have not, for a number of years, been attractive to our graduates. They appear to have had little encouragement from railroad officers."

2. "If the railroads can work out some plan whereby students can see a future, I would certainly encourage some of them to go into this field."

3. "I do not believe that the situation can be improved until the railways show more encouragement to engineering students by making them definite offers of employment under such conditions that they will have an opportunity to advance in the railway field to the same extent as they are able to in other industries."

4. "In the past too many young engineers have left the railroad field because of the uncertainty of tenure, except during the construction season."

5. "In either event it would seem to be incumbent upon the railroads to offer graduates an attractive inducement in the form of an entrance salary that is at least equal to that offered in general industry, and assurance of reasonably rapid promotion and durability of position if the student employee shows promise."

6. "Generally speaking, however, the railroads have not been particularly sympathetic toward college graduates. If the railways expect to get very many college graduates, they will have to compete with industrial corporations which make a definite bid for our students."

7. "I think it is primarily a problem of the attitude of top management of our American railroads."

8. "Opportunities for employment in the past have been few and the rewards small, in comparison with opportunities in industry relating to engineering."

9. "The railways will have no difficulty in getting engineering school graduates when they set up a schedule of positions of equal opportunities and equal pay to that which has existed for some time in commercial and industrial fields of engineering."

10. "If that should mean the installation of certain new courses, particularly in the field of railway transportation, that could be arranged, provided there were definite and attractive opportunities for our graduates in this field."

11. "Let the railroads get away from their nepotism so that our graduates will feel that the railroads will offer them something more than temporary employment as a rodman or chainman."

12. "At first, I was able to place men, but the railways did not hold them."

13. "Railway work was, and still is, appealing to young civil engineers, and it would be easy to direct graduates into that field if there were certainty that they would be satisfied there. But high-grade men will not be content unless their progress is comparable to that of their classmates in other fields of activity. Any scheme for employing college-trained men in the railway field must take this into account."

14. "The railways will have to modernize their personnel policies, however, if they plan to keep their recruits."

All of the foregoing statements point to one solution of the problem, which is that railroad management must make a sincere and energetic effort to see that well-qualified and trained personnel be offered a worth-while future. The citations indicate clearly that well-trained college men can be secured from the colleges, but it is up to railroad management to follow through with a definite aim to retain and hold men after they have been secured. The only way that worth-while men can be retained is to make their effort worthwhile.

It is my belief that the committee missed the point of these statements, and that the crux of the problem would be set forth more clearly if the committee had arrived at a conclusion as follows:

1. In general, the colleges are more than willing to co-operate with the railroads to educate and train well-qualified college men for railroad employment.

2. Railroad management has by its past performance failed to realize that those men who possess the desired qualifications will follow that employment which provides the most reward for their endeavors. This not only includes pecuniary reward, but also experience, responsibility, the chance of leadership, a limited amount of economic security, and a happy home life. Therefore, this matter should be brought to the attention of railroad management.

It is gratifying to note that the A. R. E. A. is taking steps to correct a deplorable condition, but until railroad management also takes aggressive corrective steps, all discussions with colleges regarding required course will be to no avail, and a loss of valuable time will result for all parties concerned.

HERBERT L. PRANGE,
Major, Corps of Engineers

IN COMPLIANCE with the recent order of the Office of Defense Transportation restricting the use of Pullman cars on runs of less than 450 miles, the Chicago, Milwaukee, St. Paul & Pacific has taken 42 sleeping cars out of service for the duration. Most of these Pullmans will be taken off trains operating locally between Chicago and Milwaukee, Wis., and St. Paul, Minn., and Minneapolis.

Railroads-in-War News

W. P. B. Finds Need for Passenger Cars

Authorizes priorities to put production rate up to 400 cars per quarter

In what is termed a move to relieve the unprecedented demands placed on American railroads by the "redeployment" of troops from Europe to the Pacific, the War Production Board last week granted AA-2 priorities ratings for materials and components used in the construction of railroad passenger cars, and approved schedules for the manufacture of additional cars, bringing the total authoried to 664, including those previously provided for but not yet built. As noted elsewhere in this issue, this action was followed by removal of limitations on passenger car manufacture effected by W. P. B. order L-97-a.

Production Rate to Rise—Production of the newly authorized equipment will begin "soon" on the basis of earlier authorizations, it was said, and is expected to reach a rate of 250 cars per quarter in the first quarter of 1946 and 400 cars per quarter for the second quarter of that year. These authorizations are in addition to the Office of Defense Transportation program for the construction of 1,200 troop sleepers and 400 kitchen cars now under way, completion of which is expected by December of this year.

The approvals thus given, the W. P. B. said, "re-establish the production of railroad passenger cars that have been out of production since August, 1942, because of the tightness of materials and components and the diversion of labor into the production of munitions." Moreover, the W. P. B. "hopes manufacturers will be able to produce the approved passenger cars in time to help in handling the tremendous traffic incident to the redeployment of troops," which Army estimates indicate will reach a peak at the end of the year about 38 per cent above the previous all-time record of April, 1943.

No Promises for '46—It was pointed out that priorities assistance and controlled materials have been granted only for the remainder of 1945, this being regular W. P. B. practice following V-E Day. Approval of the program for the first half of 1946 was given for the purpose of establishing the appropriate level of controlled materials allocations and priorities assistance in the last half of this year. The program, therefore, does not mean that assistance will continue to be given this production in 1946, it was said.

The authorizations thus released contemplate a production program through May, 1946, as follows, according to the W. P. B. announcement:

	Passenger cars	Troop cars
August, 1945	15	
September, 1945	2	310
October, 1945	3	455
November, 1945	17	440
December, 1945	60	395
January, 1946	96	
February, 1946	84	
March, 1946	104	
April, 1946	146	
May, 1946	137	
Total	664	1,600

Rail transportation capacity should be increased about one billion passenger-miles per quarter by the middle of next year under this production program, the W. P. B. indicated. Estimates of the total passenger-miles to be handled were reported to be about 26,924,000,000 for the second quarter of 1946, as compared to 23,412,000,000 in the fourth quarter of 1943.

W.P.B. Forms Equipment Bureau

A consolidation of several existing units of the War Production Board intended to achieve a more compact administrative structure in the face of declining activity in most of the units concerned, was announced July 16. One bureau—radio and transport—has been abolished, and most of its divisions, including the Transportation Equipment division, have been shifted to the Equipment Bureau, the newly appointed head of which is John S. Chafee, who has been director of the Tools division. The new bureau includes the followng divisions: aircraft, transportation equipment, shipbuilding, service equipment, construction machinery, automotive, farm machinery and equipment, general industrial equipment, and tools.

O. P. A. Raises Ceiling Price on Crossties

A 17 per cent average over-all increase in eastern producers' ceiling prices for railroad crossties was announced by the Office of Price Administration July 21. The increase becomes effective July 26, and averages 16 cents per crosstie. The increases range from 2½ cents to 20 cents per tie, according to species, sizes, and the area in which the tie is produced. Ceiling prices previously were the highest prices charged in December, 1942.

The Office of Defense Transportation asked the O. P. A. to authorize increases in ceiling prices of ties to meet a shortage that had become serious, and a like request was made by the War Production Board, it was explained. The increases are applicable to tie production in all states east of the one-hundredth meridian, except the Dakotas. The 100th meridian passes through the Dakotas, Nebraska, Kansas, Oklahoma and Texas.

Peak Has Passed in Moving of Wounded

All patients able to stand transport will soon be out of England

Rail travel by wounded service men is expected to show a noticeable decline before the end of this month, according to a week-end statement of the War Department, and by August all "transportable patients" should have been returned to this country from England. In its first analysis of this type of war-connected rail travel, the department disclosed that some 510,000 wounded or sick soldiers made "well over a million trips" by rail between November, 1942, and June 30, 1945.

Of the 510,000 patients, approximately 81,000 were flown to inland hospitals from airports of debarkation. Some of these may have made leave or furlough trips which would add to the total, the exact mileage of which could only be estimated. War Department policy is to grant leaves for furloughs home for rest and recuperation to as many patients as possible. In each such case, unless the patient lives in the same town where hospitalized, this would mean at least three trips: One from the point of debarkation to the hospital, one from the hospital home, and another from home to hospital for completion of treatment. In addition, some patients make several trips from one hospital to another for different treatment.

Of the more than 426,000 patients returned by ship, about 346,000 came by transport and nearly 81,000 by the Transportation Corps' 23 U. S. Army hospital ships and the three other hospital ships operated by the Navy for the Army. Another 84,000 were returned by air.

According to Major General C. P. Gross, Chief of Transportation, Army Service Forces, in June of this year, 46,000 traveled by rail in groups of 40 or more, most of them from debarkation hospitals to inland points. In addition to this record total, the Transportation Corps estimated that approximately 30 per cent of the 225,000 population of the Army's 64 general hospitals and 12 convalescent hospitals in the United States—or more than 67,000—were moving between hospitals or were on pass or furlough. This meant that more than 113,000 patients rode the nation's railroads in June. In the first six months of this year, some 262,000 patients were returned, against 173,000 for the entire previous year, 71,000 for 1943 and 3,500 for November-December, 1942.

During the first six months of 1945, the Army used 251 Army-owned hospital cars,

(*Continued on page 111*)

Truman Says West's RRs Must Have Men

Additional man-power must be found to reduce delays to troops and supplies

In a July 16 statement issued from his "temporary residence" in the suburbs of Berlin, President Truman has added his appeal to those of other government officials and railroad and union heads for more men to take jobs on western railroads. The statement follows:

"If the demands of the Japanese war are to be met, the railroads in the west must have additional manpower immediately. The manpower shortage is so serious that the War Department recently ordered 4,000 experienced railroad men to be furloughed from the Army to help ease the situation, but they are only a fraction of the number needed.

"The western railroads today need 65,000 men and need them badly. We must keep men and material flowing into the ports as fast as our convoys can transport them to the battle zone.

"The effects of the shortage already are being felt, with the peak load still months away. Our soldiers returning from the European campaign are not getting the best accommodations because many cars are in the shops awaiting repairs and overhauling. Some troops are being delayed at the ports because trains cannot be supplied promptly. Over-worked crews must be given time to rest before taking trains out on long, hard trips. Trains are often late because of short switching crews which cannot keep traffic moving at top efficiency. Unless additional manpower is found these delays will become serious as the load increases.

"That is why I am bringing this situation to the attention of the American people. Any patriotic American who is not already engaged in essential war work can make a real contribution toward the defeat of Japan by applying for a job on a western railroad during this emergency period. Those who are now working on railroads can do a great service to their country by remaining on the job."

Patterson Refuses Aid—On the day following the release of this statement, it was reported that Under Secretary of War Patterson flatly rejected an appeal by a group of California congressmen that more railroad men now in the Army be furloughed for work on the western roads.

While the western roads' needs for more men are most acute, there is of course a long-prevailing nation-wide shortage of railroad employees, as regularly reported by the Railroad Retirement Board. Currently it is said that needs for additional men total about 100,000, including 12,000 skilled workers. Roads serving the West coast ports alone have urgent critical requirements for 1,000 brakemen, switchmen and firemen, 3,000 skilled trades journeymen, and 1,500 mechanics' helpers and apprentices, it is understood.

While the recruitment of Mexican citizens for temporary employment on the railroads, particularly in the West, has materially eased the shortage of unskilled men, it is not expected that much additional relief can be obtained from this source, as the number of Mexican citizens that can be made available to the railroads under this arrangement is limited, and the number now employed is not far short of the quota, which would have to be doubled to meet the reported needs for unskilled men alone, it is estimated.

Seventeen western railroads and the Pullman Company have been accorded the War Manpower Commission's top priority rating ("priority category 1") for the interregional recruitment of additional employees in 22 job classifications, and local W. M. C. offices have been authorized to refer applicants to the specified carriers on interregional orders without regard to present employment, except where that employment is in other first priority activities, such as ship repair.

In cases where individual local W. M. C. offices are unable to fill their quotas of interregional orders for the western roads through regular W. M. C. procedures, they are being authorized to refer applicants to the carriers even though they are not otherwise eligible for a "certificate of availability," W. M. C. Chairman McNutt has disclosed.

W. M. C. priority category 1 has been assigned to the following railroads: Atchison, Topeka & Santa Fe; Chicago & North Western; Chicago, Burlington & Quincy; Chicago, Milwaukee, St. Paul & Pacific; Chicago, Rock Island & Pacific; Denver & Rio Grande Western; Great Northern; Missouri-Kansas-Texas; Missouri Pacific; Northern Pacific; St. Louis-San Francisco; Southern Pacific; Texas & New Orleans; Texas & Pacific; Union Pacific; Western Pacific; and Spokane, Portland & Seattle. The Pullman Company is accorded the same priority on repair operations at Chicago and points west.

The preferred rating applies to the following occupations: engineer, hostler, conductor, switch foreman, yardman, fireman, brakeman, signal and maintenance man, switchman, dispatcher, yardmaster, blacksmith, boilermaker, carman, car inspector, electrician, machinist, molder, sheet metal worker, telegraph operator, towerman, and signalman.

It is expected that this action will aid the efforts of the government "interagency railroad committee," which has undertaken to coordinate a recruiting campaign to obtain more men for the western roads.

Senate Committee Rejects Tax Provision for Revamped Roads

In voting to make a favorable report on the House-approved interim tax bill, the Senate committee on finance eliminated that provision stipulating that a railroad corporation acquiring properties of a reorganized road would be the "same taxpayer" as its predecessor insofar as carry-overs or carry-backs of net operating losses and unused excess profits credits are concerned. The bill is H.R. 3633, and the House ways and means committee's explanation of the railroad provision was given in the *Railway Age* of July 14, page 77.

Passenger Cars Put Under O.D.T. Control

Kendall to assign cars army demands; "traipsing" of civilians is deplored

The Office of Defense Transportation moved to exercise mandatory control of railroad passenger operations July 17, when it issued its General Order No. 55, setting up formal mechanism for assignment of any or all passenger equipment, except sleeping cars, to military use by procedures similar to those which the railroads followed voluntarily up to this time.

Another Jolt to Civilians—While the O. D. T. outline of the order's provisions, and statements by Director J. Monroe Johnson, bristled with warnings that further curtailments of civilian passenger service are to be expected in order that demands of the armed services for accommodations for service men returning from overseas may be met, no immediate consequences of this character were observed, and it was suggested in some quarters that the most productive result of the order—and one perhaps not unforeseen—might be its effect in further reducing travel by civilians during the period of peak military movement.

The order in effect provides that all passenger, baggage and express cars shall be used for such purposes, and in such services, as the O. D. T. shall direct, and the O. D. T. has indicated that its purpose is primarily to make more equipment available for military service. To carry out the order, W. C. Kendall, chairman of the Car Service division of the Association of American Railroads, has been named agent of the O. D. T. with "full authority," subject to the general supervision of the director of the O. D. T. Railway Transport department, to distribute these cars in such manner as, in his judgment, will provide "sufficient suitable equipment to meet the demands of the military," where possible.

Threat to Vacationers—"The allocation and assignment of equipment to military service will require that it be withdrawn from civilian service," the O. D. T. said. "This means that civilian passenger service will be further curtailed. The demands of the military for equipment are expected to increase to the point where at times regular scheduled passenger trains will have to be suspended in order to provide the equipment. It may be that persons leaving home on unnecessary trips in the next few months will find themselves unable to return. There is not enough equipment to handle the same volume of civilian passenger traffic as has been handled heretofore, and at the same time redeploy our troops to the Pacific. The military requirements must and will be met."

The order was effective July 17, to remain in effect until the termination of the present war, unless earlier modification or vacation is ordered by the O. D. T. It requires any rail carrier (including sleeping car and express companies) in possession

of any car of the types specified to cause such car (1) to be used for such purpose and in such service as the O. D. T. shall direct, or (2) to be leased, rented, hired, or furnished to any other carrier or other person designated by O. D. T., under terms to be arrived at by the parties, or under applicable C. S. D. per diem or mileage rates.

Present Practice Continued—On the day the order was issued, C. H. Buford, vice-president, maintenance and operation, of the A. A. R., issued the following statement:

"This order makes it mandatory for the railroads to do the things they have been doing on a voluntary basis and this is, furnish equipment for the movement of military personnel in preference to civilian business.

"Present plans contemplate a large increase in military movements which will call for the use of passenger equipment in excess of any previous demands and the needed equipment will have to be withdrawn from civilian service from time to time as is needed to give the military movements preference.

"It is hoped that ways can be found to meet the military needs without unduly crippling any particular area and an effort will be made to select equipment in a way that will avoid the need for discontinuing regular trains outright."

Supplementing the O. D. T. statement issued with the order, Colonel Johnson discussed the passenger traffic situation on a radio program broadcast through the Washington A. B. C. station WMAL on July 17. In part, he said:

Our men are coming back from Europe faster than was expected. Fifty thousand more men than were scheduled to arrive from Europe in June actually reached our home ports in that month. Why, on Wednesday of last week, more than 34,000 troops landed in New York, the largest number of troops that ever landed there in one day. July may well be the biggest month in the entire redeployment program from the standpoint of arrivals. But there is more to it than that. These men are going to travel thousands of miles across the country . . . most of them will make as many as seven rail moves. And we are only at the beginning. Troop travel will increase from now until November or December, and it will be almost as heavy well into next year.

Too Much Sight-Seeing—When asked to interpret the travel situation from the viewpoint of the average citizen, Colonel Johnson replied: "It means that it is high time for anybody planning a pleasure trip to give up wishful thinking. We have asked the public again and again to cooperate by staying off the trains, buses, planes, unless their trips were absolutely essential. But there are still many more sight-seeing tours than the one which brought 40 people to Washington the other day. . . . However, many, many patriotic citizens have given up travel plans at the government's request—but not enough. We've got to stop this traipsing around the country on pleasure trips and get down to the job of winning the war."

Last week Colonel Johnson appealed to government departments and agencies to reduce travel by officials and employees during the period of heavy troop movements. He said in part:

I am firmly convinced that government agencies can and must make still further and greater reductions in travel. Government officials should discontinue the scheduling of group meetings both in Washington and elsewhere during this critical transportation period. Resort must be had to other means of informing field personnel and others of programs instituted by the various government agencies. In many instances travel can be eliminated by the extended use of postal and communication facilities.

More Kitchen Cars—Meanwhile other travel conservation measures—particularly the suspension of sleeping car operation on runs not over 450 miles in length—have been going into effect, affording some relief to the troop travel demands. Arrangements are progressing under which up to 500 baggage cars are being contributed by railroads all over the country for temporary service as kitchen cars, particularly in the symbol train movement of troops from eastern "staging areas." Already 136 such cars have been provided, and a substantial number have been equipped for kitchen purposes by the War Department. These cars will be distributed by the Pullman Company in connection with the distribution of troop kitchen cars already under its control.

The replies of the railroads and the Pullman Company to the O. D. T. order eliminating over-night sleeping car runs were made public last week by that agency. Speaking for the carriers, J. J. Pelley, president of the A. A. R., wrote in part:

We thoroughly appreciate the need for additional sleeping cars for our service men, which necessitates the issuance of this order, and I am sure the public will also. Please be assured, therefore, that the railroads will wholeheartedly cooperate, not only in carrying out the provisions of the order, but also in every other way so as to provide the necessary equipment for handling our military requirements.

You realize, of course, the burden such an order places upon other important travel connected with our war effort and the inevitable creation of inequities which of necessity need be reviewed and corrected in the light of experience. I mention this fact because these are features which I know you will not want to overlook in such further consideration of the matter as may be necessary.

The Pullman Company's response, through a letter from Champ Carry, executive vice-president, read in part as follows:

The management of The Pullman Company thoroughly appreciates the increased demands of the various branches of the armed services for sleeping cars and, therefore, will cooperate with you in every way to make this order effective so that in addition to the more than 700,000 service men and women we have been carrying each month in sleeping cars, thousands more may now ride long distances in comfort.

As you no doubt appreciate, The Pullman Company now has in service, exclusive of the 1,237 troop sleepers furnished by the Defense Plant Corporation, approximately 500 more sleeping cars than it had in service during World War I, and since Pearl Harbor more than half of the Pullman fleet has been made available to the armed forces. As you point out in your joint letter, after Order 53 has been put into effect the armed forces will have approximately 63 percent of the sleeping cars of the country at their disposal. In addition, a very substantial portion of the accommodations in the cars operated on regularly scheduled trains will continue to be reserved for the government reservation bureaus.

The Pullman Company has and will continue to place all available cars at points specified by the armed services. The choice of the points to be served and the particular units to be moved will remain under the jurisdiction of the armed services.

No Short-Trip Air Priorities

Travelers making short trips must depend on coaches or buses, with the alternative of obtaining unsold or unclaimed sleeping car accommodations available at train departure time, or must rely on securing non-priority tickets for air travel, the War Department stated this week in disclosing its policy not to grant air priorities for journeys under 450 miles.

Explaining that the removal of Pullman sleeping cars from runs of 450 miles or less had already brought a substantial increase in requests for air priorities, the department announced its view that air transportation can make its most effective contribution to the war effort by accommodating long-haul passengers traveling for war-connected reasons. Such travelers must be assured an opportunity to reach their destinations, it was said, without interference from bottlenecks and congestion that would be created by air priorities for short trips.

Holiday Hits Grain Shipments

For the first time in 16 weeks, the number of carloads of grain and grain products shipped in the week ended July 7 showed a decrease under the total for the preceding week, the Office of Defense Transportation has reported, pointing out that the reverse in the trend occurred in a holiday week. The decline was 3.8 per cent, shipments in the week ended July 7 being 54,932 carloads as compared with 57,120 the week before.

Total carloadings of grain and grain products for the first 27 weeks of this year were 1,298,405, as compared with 1,266,523 cars in the corresponding period last year, an increase of 31,882 cars, according to the O. D. T. In the Western districts loadings for the first 27 weeks of this year were 3.5 per cent above the same 1944 period, the figures being 885,199 and 855,384 cars, respectively.

In the Western districts, grain loadings for the week ended July 7 were 40,843 cars, a decrease of 91 cars, or 0.2 per cent, from the corresponding 1944 week, the O. D. T. stated.

W. M. C. Funds for Recruiting Mexican Laborers

The final version of the Labor-Federal Security appropriation bill for the fiscal year ending June 30, 1946, contains no restriction against further importations by the War Manpower Commission of foreign workers, including Mexicans brought here for work on the railroads. As noted in the *Railway Age* of July 7, page 38, the House debate on the conference report, which reduced the W. M. C. appropriation from the $1,600,000 approved by the Senate to the $800,000 finally allowed, included some discussion to the effect that none of this $800,000 would be available for bringing in additional workers.

No such limitation is imposed on W. M. C.'s use of the funds in the act as finally approved and printed as Public Law 124—79th Congress. The $800,000 is made available "To enable the War Manpower Commission to provide . . . for the temporary migration of workers from foreign countries within the Western Hemisphere . . . for employment in the continental United States with industries and services essential to the war effort. . . ."

Meanwhile, the final version does retain the provision stipulating that "no part of the funds herein appropriated shall be available for any transportation of railroad

workers." As pointed out in the July 7 issue, this would involve no change in the existing situation, for the railroads have been bearing the expense of transporting the Mexicans assigned to them, ever since the inauguration of the program.

Peak Has Passed in Moving of Wounded

(*Continued from page 108*)

making them do the work of 3,804 Pullmans which otherwise would have had to be employed, General Gross said, adding that by August, 69 new unit-type cars would be placed in service to increase the fleet to 320. In addition to these, the Army has 60 medical kitchen cars which are used on long hospital-train movements.

Because of the special mission of these hospital cars, some of them have to be dead-headed over portions of the routes but 64 per cent of the nearly 10,000,000 miles operated during January-June, 1945, have been in active service. General Gross said the Army's hospital cars were not enough to handle all patients and, consequently, for the first six months of this year alone the Army was forced to enlist the aid of the railroads in obtaining 5,978 Pullmans, 884 of them for use in June.

While being carried by rail, patients are cared for by a staff of doctors, nurses and medical technicians. "Convoy personnel" of this type is made available for moves ranging in size from one patient to a hospital train. The volume of convoy personnel for the first six months of this year was 54,663, of which 10,235 were for June alone.

I. C. C. Service Orders

Because of a critical shortage of refrigerator cars in Arizona and California, the Interstate Commerce Commission has issued Service Order No. 338, effective July 18 through July 27, unless otherwise provided, requiring the Texas & New Orleans to deliver daily to the Southern Pacific at El Paso, Tex., 75 refrigerator cars of any ownership, suitable for loading with fruit or vegetables, and requiring the Southern Pacific to move from El Paso and deliver to loading territories in Arizona and California 400 such cars daily.

Service Order No. 337, effective from July 16 through October 14, unless otherwise provided, requires U. S. Department of Agriculture permits for the rail transportation of oranges or lemons from Arizona or California points to interstate or Canadian destinations, either in carload or l. c. l. lots, in any type car.

Service Order No. 331, which restricted the movement of grapes by express from Arizona and California, has been vacated by No. 331-A, effective July 16. The Department of Agriculture, however, in a statement calling to the attention of grape shippers the serious transportation situation they will face this year, has warned that it may be necessary to issue an order prohibiting the interstate shipment of California grapes for consumption in other than fresh form.

The suspension of the prohibition on holding grain or seeds for orders at certain Minnesota points has been extended through July 26 by Revised Service Order No. 160-C.

The requirement of a War Food Administration permit for the shipment of potatoes from certain areas, effective under Service Order No. 259, has been entirely removed, by Amendment No. 8 to the sixth revised version of that order, effective July 14. Two counties in Virginia and one in California were the last to be subject to its requirements.

General permits under Service Order No. 332, which prohibits loading of cars at Arizona and California points on Sundays and holidays, with certain exceptions, allow the order's provisions to be disregarded insofar as it applies to carload shipments of ice for use in icing cars, to shipments of peaches to canneries, except in refrigerator cars, to the return of empty lug boxes from canneries, to l. c. l. and transfer freight in the carrier's possession, and to company fuel oil. These permits were effective July 13.

Under Amendment No. 3 to Revised Service Order No. 112, refrigerator cars which are floated by railroads to railroad piers and unloaded on those piers by railroad labor are exempted from the order's destination free time restrictions on fresh or green fruits or vegetables. The amendment was effective July 16.

L-97 Is Revised

The War Production Board announced on July 17 that control over the production of new locomotives and freight and passenger cars, as effected under its L-97 and L-97-a orders, has been removed by the revocation of these orders and by an amendment, covering transportation equipment, to the W. P. B. general scheduling order (M-293, Table 18).

The result of this action is that orders for new locomotives and cars now may be accepted and scheduled by manufacturers without prior clearances by W. P. B., so long as such orders do not interfere with delivery directions still outstanding, it was stated.

To insure space in schedules for critical and urgent orders, steam and Diesel-electric locomotives and freight and passenger cars have been listed as "undesignated products" in Table 18 of the general scheduling order, which means that orders may be placed and accepted and production may be scheduled by builders unless rescheduling becomes necessary to insure delivery for "highly essential needs of the military services or war-supporting agencies," according to the W. P. B.

Except in cases of military necessity, the responsibility for scheduling new production hereafter will rest with the manufacturer, and he is not required to file his schedules with the W. P. B. unless he is specially directed to do so. It was explained, however, that the W. P. B. Transportation Equipment division still would like to receive full information from builders on production and schedules, even though it is not formally required.

Due to the necessity of using otherwise empty westbound refrigerator cars for shipments that otherwise would require box cars, railroads and shippers have been asked to emphasize their efforts to make this substitute movement as effective as possible. W. C. Kendall, chairman of the Car Service Division, Association of American Railroads, has put the situation in this way:

"The present prospect as to heavy volume of troop movement and war freight movement to the West coast makes more important than ever the fullest compliance with Service Order 104. At the present time several western routes are operating at capacity and finding it necessary from day to day to set off empty cars because of the heavy volume of loaded westbound movement. Use of refrigerator cars to points in California, Arizona, Nevada, Utah and Idaho will place the refrigerator cars in position for perishable loading and make unnecessary westbound loaded haul of a box car and the eastbound return haul of an empty box car."

T. C. Promotions in Europe

Eight Transportation Corps officers assigned to the Motor Transport and Military Railway Service and other sections of the Army T. C. in Europe have received promotions, Headquarters, E. T. O., has announced.

Lt. Col. Benjamin H. Decker, of Salt Lake City, Utah, for 30 years with the Denver & Rio Grande Western, and now executive officer of the First M. R. S., has been made a full colonel. Others promoted to this rank are: Lt. Col. Oscar R. Diamond, McComb, Miss., for 21 years with the Kansas City Southern, and now assistant general manager in charge of the Equipment deparment of the 1st M. R. S.; and Lt. Col. Oliver W. Kempster, of Peoria, Ill., assistant general manager in charge of the Security section of the 1st M. R. S.

Capt. Joseph L. Potter, of Rye, N. Y., has been named a major.

Promoted to captain were: 1st Lt. Richard A. Barnes, of Syracuse, N. Y., and now with the equipment branch of the Motor Transport Service; 1st Lt. Frank P. Mazetti, of Tuckahoe, N. Y., adjutant of the 10th Traffic Regulation Group; and 1st Lt. John Josewitch, of Brooklyn, N. Y. Second Lt. Lee R. Johnson, of Johnson City, Tenn., was named first lieutenant.

Authorizes 9,000 New Cabs

Authorization for the production of 4,000 "special purpose" taxicabs has been granted by the War Production Board for the second half of 1945, and an additional 5,000 has been authorized for the first quarter of 1946, the W. P. B. announced last week.

It was explained that production of these taxicabs was being permitted to meet domestic civilian requirements of the Office of Defense Transportation, for use principally in cities with large railroad terminals. The "redeployment" of large numbers of service men has placed an added load on the transportation facilities at these points, the W. P. B. announcement said, quoting the O. D. T. to the effect that the cabs are "badly needed."

GENERAL NEWS

Lea Announces Plans for Transport Study

House committee will conduct broad survey, seeking views of all interests

Chairman Lea of the House committee on interstate and foreign commerce on July 12 introduced House Resolution 318 to authorize and direct the committee or any subcommittee thereof "to investigate the transportation situation with a view to recommending legislation that will result in a consistent public policy fair to all competing agencies of transport, to the using and investing public, and to labor to the end that the country's commerce may be moved with the greatest possible degree of economy, safety, and dispatch." Mr. Lea's plans to introduce the resolution and launch the study program were reported in the *Railway Age* of July 14, page 74.

The resolution would give the committee power of subpoena, and would authorize it to employ and fix the compensation of "such assistants, experts, and employees, as it deems necessary in the performance of its duties under this resolution." It would also be authorized to utilize the facilities and personnel of federal government agencies; and it would be required to report the results of its investigation with recommendations during the present Congress which runs through 1946. Meanwhile, the committee would "from time to time, in its discretion, make such preliminary reports" to the House "as it deems desirable."

Initial Spade Work—With the introduction of the resolution, Chairman Lea issued a statement revealing that the "preliminary spade work" on the investigation will be done by the committee's recently created transportation subcommittee. As noted in last week's issue, the general plan is to invite various interests to submit their views, no public hearings being contemplated at this time. The transportation subcommittee is headed by Mr. Lea, the other members being Representatives Crosser of Ohio, Bulwinkle of North Carolina, Boren of Oklahoma, Priest of Tennessee, Harris of Arkansas, Sadowski of Michigan, Democrats; Wolverton of New Jersey, Holmes of Massachusetts, Reece of Tennessee, Halleck of Indiana, and Brown of Ohio, Republicans.

"This proposal," said Mr. Lea, "stems from a growing realization on the part of the subcommittee . . . that in this field of industry we face a most perplexing and vital post-war problem. This realization is shared by our full committee. The problem is vital because transportation is the connecting link between our producing machine and the consuming public. Without adequate, economical transportation our whole economy can bog down no matter how much energy, wisdom, and capital our industrial executives may put into other phases of reconversion from a war economy to an economy of peace.

To Avert Chaos—"Failure to provide legislative remedies to meet the needs of our transportation system or failure to focus the thought of leaders in the transportation field upon their own responsibility, apart from legislation, in meeting their post-war problems, can prolong by years the nation's period of reconversion to peace. Indeed, it might even throw our economy into chaos.

"In spite of the overwhelming importance of these problems, our planning to date for a national transportation system geared to a post-war United States has been sporadic, haphazard, and without sufficient coordination."

Mr. Lea next named the members of the subcommittee who have assured him of their "wholehearted support" on the study program. The investigations will be pursued "as promptly and effectively as their complexities will permit," the subcommittee being already at work on the preparation of a list of suggested topics for the consideration of "all who may be interested" in transportation problems.

"These topics," the chairman continued, "are in no way intended to be exclusive of other subjects which may be presented. These suggested topics will be given wide circulation to operators of transportation facilities, shippers and shipper organizations, committees and associations with an interest in transportation, chambers of commerce and similar public bodies, and to federal and state regulatory commissions.

"However, the committee will not only welcome but invite information and constructive suggestions from students of transportation and any other persons who may be interested in these problems. We wish to make it clear to the recipients of our invitations that they are not confronted by a questionnaire. They are at liberty to comment on as much or as little of the suggested subjects as they may desire. We want their independent voluntary information and constructive suggestions. They must understand also that replying to our invitations will not necessarily involve their appearance before the committee.

"We would welcome these replies as soon as possible, but hope that they may all be furnished by December 1st. The information and suggestions furnished will be carefully studied and analyzed for the use of the committee in consideration of proposed legislation."

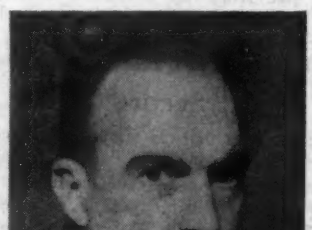
(*Continued on page 116*)

Overton in History Chair at N. W. Univ.

Burlington officer, author of Q history, is authority in carriers' records

Richard C. Overton, superintendent of the relief department of the Burlington, has resigned effective July 15 to accept appointment as professor of business history at Northwestern University, Evanston, Ill.

Dr. Overton has been with the Burlington for the past six years, during which time he has been actively identified, both officially and unofficially, with educational activities—especially in connection with effecting a better understanding between professional historians and leaders in the railway industry, to the end that historians, given improved contact with the railroads and their records, may more adequately and accurately report the accomplishments of the industry in their writings.



Richard C. Overton

Dr. Overton was born at Montclair, N. J., in 1907 and attended the Hotchkiss School (Lakeville, Conn.) and Williams College, from which he received his A. B. degree in 1929 and his A. M. in Economics in 1934. He was awarded an A. M. by Harvard in 1936 and a Ph. D. in history in 1944. In his academic work he has concentrated on American history, with special attention to the history and economics of transportation. He has had extensive teaching experience, having been at various times during the 1929-39 period: instructor in French at the Hotchkiss School, assistant in economics at Williams College, instructor in American history at North Adams (Mass.) State Teachers College, assistant in the history department at Harvard and counsellor in history at Kirkland

(*Continued on page 116*)

Ask Postponement of Class Rate Changes

Northern states dislike their increase; carriers want more time to figure

The Interstate Commerce Commission has received petitions from various states and organizations in Official territory asking for further consideration of its report and order in Nos. 28300 and 28310, particularly with respect to the interim increases in class rates within that territory required under the order, and the railroads in that part of the United States affected by the requirement that class rates be increased or decreased *ad interim*, pending preparation of a uniform classification and establishment of uniform class rates (that is, all territories east of the Rocky Mountains) have asked that the effective date of the order in No. 28300 be postponed to April 1, 1946, in order that the physical task of preparing the new tariffs may be accomplished.

A Lot of Paper-Work—The carriers of Official, Illinois Freight Association, Western Trunk Line, Southwestern Freight Bureau and Southern Freight Association territories have advised the commission that publication of the adjusted class rates required by the order by the simple procedure of publishing supplements to existing schedules is "not practical" where the rates must or may be reduced. "The magnitude of the task facing the carriers and the steps necessary to accomplish the result contemplated by the order can now be appreciated," they stated, "and it is apparent that ascertaining, publishing and filing the new rates—particularly the reduced rates called for by the order—are far from being simple or easy tasks."

To illustrate the magnitude of the job, as seen by the carriers, it was pointed out that since short-line distances were not the basis for most of the present interterritorial rates, these distances must now be computed in every case where they have not been computed for other purposes. "In a large majority of cases these distances are not presently available," the petition said. Between Indiana and Michigan and Western Trunk Line territory, for example, it was estimated that it will be necessary to recompute some 201,731 first class rates; while between Trunk Line and New England territories on the one hand and Western Trunk Line on the other it will be necessary to deal with about 777,860 mileages. Between Central Freight Association and Western Trunk Line territories some 586,500 mileages must be checked, and about 2,000,000 calculations will be required, according to the petition, for determinations within Western Trunk Line territory.

Millions of Calculations—All of these computations will contribute to arriving at the short line distances, it was stated. "Having ascertained the short line distance, the next step is to set down the rate for that distance under the scale prescribed as minima, then the present rate, next the present rate less 10 per cent, and finally the rate to be published. The latter may be the present rate, it may be the present rate reduced 10 per cent, or it may be the minimum rate under the distance scale. Enough work has been done to demonstrate that a very large proportion of the interterritorial rates will be affected by the minimum scale."

The carriers assured the commission that they were exerting every effort to complete the preparation of the new schedules as rapidly as possible. Nevertheless, they pointed out, even though every available man is engaged in this work, men with the training and experience necessary are limited in number, particularly under present conditions, and a postponement of the effective date of the adjustments to the date proposed is in their opinion required by the physical requirements of the undertaking.

The commission already had extended to September 3 the time for filing petitions for leave to intervene in the No. 28300 proceeding, and for the public regulatory bodies of the 11 states in Mountain-Pacific territory to file petitions therein, these states not having been parties to the proceeding up to the issuance of the order requiring eventual uniformity of class rates in the rest of the United States.

North Seeks Delay—Among other petitions received by the commission in the class rate and uniform classification investigations, the New England states, Wisconsin, and the states of New York, New Jersey, Pennsylvania and Maryland, together with various commercial organizations in the respective sections, have asked for reconsideration and reargument, and postponement of the effective date for those purposes, in view of the increases in Official territory class rates which the commission has directed carriers to make. A petition also has been filed on behalf of Arkansas, Kansas, Oklahoma, Texas and western Louisiana, urging clarification of the provision that "it is not intended that existing exception rates, column rates or commodity rates shall continue to apply if higher than the required reduced class rates in connection with the present applicable classification ratings."

The New England petition, noting that the commission has "carefully refrained from finding" that existing class rates in Official territory are less than reasonable minimum rates, went on to say that the record "precludes" an increase in these rates, that there is no evidence in support of an increase, that it does not warrant a finding that these rates are unduly preferential in violation of section 3 of the Interstate Commerce Act, and that the commission's order requiring an increase is in violation of section 15(a)(2). Moreover, it continued, the record does not warrant the finding that class rates in the South and West are unlawful and should be reduced, nor is there in it a showing that non-uniformity of classification ratings is unlawful.

The four Eastern Trunk Line territory states named detailed somewhat similar arguments against the propriety of the commission's finding that the Official ter-

(*Continued on page 117*)

Interest Charges of C. of Ga. Are Slashed

I. C. C. approves $84,408,798 capitalization; wipes out equity holders

Division 4 of the Interstate Commerce Commission has approved a plan of reorganization for the Central of Georgia under section 77 of the Bankruptcy Act, fixing the new company's capitalization at approximately $84,408,798, reducing annual fixed charges from $4,576,871 to about $644,448, and making no provision for holders of the old company's stock, which was held to be without value.

The approved plan, which is much the same as the plan proposed by the debtor's trustee (reported in *Railway Age* of February 5, 1944, page 334), provides for only a slight reduction in the old capitalization, which, including lessor company stocks in the hands of the public and certain interest owed affiliated companies on unsecured debt, was $86,170,919. Commissioner Porter dissented from the majority report approving the plan (by Commissioners Mahaffie and Miller) on the ground that the new capitalization is in excess of the unimpaired system capitalization of the debtor, and greater than is justified by prospective earning power.

I. C. Left Out—All of the old company's common stock, except directors' shares, is held or controlled by the Illinois Central, and no provision was made in the plan for this road's stock interest in the debtor company. In addition, the debtor owed the Illinois Central $1,108,347 on open account, for which that company had filed no claim, and no provision was made therefor in the distribution of new securities. For certain subsidiary bonds held by the Illinois Central as collateral, the plan provided for allocation of certain new securities, including less than one-half of one per cent of the new common stock.

Control of the Ocean Steamship Company of Savannah, which the old company enjoyed through ownership of stock, would be retained by the new company, as the plan provides for an exchange of new securities and cash for this stock, which was pledged to secure an issue of Central Railroad & Banking Company of Georgia collateral trust bonds.

Undermaintenance—The division's report points out that the debtor company's properties were, and still are, "in a condition of undermaintenance," which the trustee has undertaken to rectify by a 5-year program of rehabilitation to cost $15,249,400, including $8,877,000 for acquisition of equipment. Under court orders, cash was set aside to cover the 1943 and 1944 portions of this program, leaving $8,807,290 of cash to be provided for the next three years. "The trustee in preparing the plan has proceeded upon the assumption that the rehabilitation program will be completed under orders of the court as nearly as possible in accordance with the program as originally laid out. Other improvements not contemplated in the re-

habilitation program, but costing substantial amounts, are also being considered by the trustee."

Varies From Examiner's Report — The plan approved by the division departs in many respects from the recommendations made in the examiner's report, as outlined in *Railway Age* of November 18, 1944, page 790. The Central of Georgia system includes 428 miles of line owned by three lessor companies, the South Western, the Augusta & Savannah, and the Chattahoochee & Gulf. These companies are not in reorganization, but the matter of their present interest, as lessors, in certain equipment is in process of determination in the courts. Pending such determination, the division has proceeded on the assumption of the trustee that the lessors now have no interest in the equipment, as no considerable amount of the equipment which was delivered by them to the old company is now in existence.

The new capitalization and annual charges are shown in Table I.

Table I—New Capitalization and Charges

Issue	Capitalization	Charges
Equipment obligations undisturbed	$3,499,852	$84,448
Chattanooga, Rome & Southern divisional bonds	139,023	5,561
First mortgage series A bonds	13,860,977	554,439
Sinking fund for divisional bonds		695
Total fixed-interest debt.	17,499,852	645,143
Income bonds, series A..	2,730,595	720,000
Income bonds, series B..	13,269,405	
First mortgage sinking f'd		69,305
Series A income bonds sinking fund		13,653
Series B income bonds sinking fund		66,347
Total contingent debt..	16,000,000	869,305
Total interest-bearing securities	33,499,852	1,514,448
Series A preferred stock..	974,211	939,228
Series B preferred stock..	17,810,351	
Common stock	32,124,384	
Total	$84,408,798	$2,453,676

The series A income bonds will have preference over series B in sinking fund benefits, but not in payment of interest. The series A preferred stock will have preference over series B in liquidation, but not in payment of dividends. Payment into a debt retirement fund will be required whenever cash dividends are paid on common stock, and will amount to 50 per cent of such dividends.

Allocation of Securities—The allocation of new securities and cash to various old company securities and holders of other claims is shown in Table II. As shown, the Reconstruction Finance Corporation would receive somewhat more than one-third of the new company's common stock, while holders of the old company's refunding and general mortgage bonds would receive somewhat more than one-half of the new common. The plan provides that all of the preferred and common stock of the new company shall be placed in a voting trust to run for 5 years from the date of consummation of the plan. Dividends on the new preferred stock are cumulative up to 15 per cent. Holders of preferred stock are entitled to one vote per share on all matters except for directors, who are to be selected by cumulative voting, with the preferred being entitled to elect a majority of the directors when dividends are in arrears in the amount of 10 per cent or more, and under certain other conditions.

The plan contemplates the consolidation, merger or purchase of the properties of the lessor companies in lieu of continued operation under the leases, provided such transactions can be carried out on the terms approved in the plan. However, the Augusta & Savannah and the South Western have asked that the existing leases be continued after the reorganization is effected, while the Chattahoochee & Gulf has not accepted the valuation of its properties.

The effective date of the plan would be January 1, 1945.

Commission Asks for Rehearing on Interstate Fares

The Interstate Commerce Commission has filed a petition with the Supreme Court of the United States asking a rehearing in the intrastate passenger fare case, *North Carolina vs. I. C. C.*, in which the court, by a five-to-four decision, held that the commission improperly prescribed intrastate passenger fares at the same level as interstate fares, because its order was not based on "adequate findings, supported by evidence." The court's opinion was summarized in *Railway Age* of June 16, page 1071.

The decision in this case weakens the commission's control over the national transportation system, the petition stated, because it will encourage state commissions to decline to go along with the I. C. C. in adjusting intrastate rates in line with interstate rates, even though transportation conditions are substantially identical, if the state body is of the opinion that the total revenues of the carriers involved are above what it considers a reasonable rate of return. If authority over the important question of adequacy of the general level of rates and carrier revenues is to be divided between the federal agency—in which responsibility for the matter was "exclusively" placed by Congress—and 48 state commissions, conflict and confusion will result, it contended, and the purpose of Congress to maintain an efficient national transportation system will be "frustrated."

Seven arguments were advanced by the commission in support of its view that it had, despite the court's decision, met the

Table II—Allocation of Securities and Cash

Outstanding issue	Total claim	Undisturbed	Cash	Divisional bonds	First mortgage bonds	Income bonds series A	Income bonds series B	Preferred stock series A	Preferred stock series B	Common stock	Total allocations
Equipment obligations	$3,499,852	$3,499,852	$	$	$	$	$	$	$	$	$ 3,499,852
C. R. & S. 5's, due 1947	343,000		203,977	139,023							343,000
Chattanooga division 4's, due 1951	2,886,657		26,931		654,156		1,231,359	974,211			2,886,657
First mtge. 5's, due 1945	9,070,833		1,087,085		5,253,153	2,730,595					9,070,833
Consolidated mtge. 5's, due 1945	29,540,700		1,107,536		3,048,507		9,334,830		16,049,827		29,540,700
Ref. & gen. mtge. 5½'s, due 1959	8,368,750		17,138		16,431		25,508		32,777	5,418,045	5,509,899
Ref. & gen. mtge. 5's, due 1959	20,962,500		42,930		41,158		63,894		82,103	13,571,413	13,801,498
First preference inc. 5's, due 1945	133,000									142,975	142,975
Second preference inc. 5's, due 1945	92,000									96,600	96,600
Third preference inc. 5's, due 1945	44,000									45,100	45,100
Central R. R. & B. 5's, due 1942	2,641,188		500,000		2,141,188						2,641,188
Augusta & Savannah, capital stock	1,022,900				532,000		587,937				1,119,937
Chattahoochee & Gulf, capital stock	218,200		163,650								163,650
South Western capital stock	5,047,100				2,138,972		1,720,901				3,859,873
Mobile division 5's, due 1946	1,625,000						250,000		500,000	250,000	1,000,000
Macon & Northern 5's, due 1946	1,365,000								630,000	210,000	840,000
Middle Ga. & Atl. 5's, due 1947	671,125								310,000	103,000	413,000
Oconee division 5's, due 1945	674,548								135,000	141,133	276,133
Reconstruction Finance Corp.	4,565,889		36,476		34,969		54,288		69,760	11,531,007	11,726,590
Railroad Credit Corp.	355,134		102,744*							105,073	207,817
Illinois Central, pledgee	225,750		462		443		688		884	146,154	148,631
Pullman-Std. Car Mfg. Co.	507,500									212,752	212,752
Ocean S.S. Co. of Savannah	298,850									126,282	125,282
Judgment creditors	61,449									25,760	25,760
Central of Ga. stock	20,000,000										0
Totals	$114,220,925	3,499,852	$3,288,929	$139,023	$13,860,977	$2,730,595	$13,269,405	$974,211	$17,810,351	$32,124,384	$87,697,727

* Cash $75,000, marshalling and distributing fund $27,744.

requirements of the law in basing its finding in the intrastate fare adjustment on evidence, and that determination of the question whether the level of the body of rates as a whole meets the standards set up in section 15a of the Interstate Commerce Act, and the objectives of the national transportation policy, is a matter for the administrative judgment of the commission and not subject to judicial review.

Freight Car Loading

Loadings of revenue freight for the week ended July 14 totaled 883,268 cars, the Association of American Railroads announced on July 19. This was an increase of 156,864 cars or 21.6 per cent above the previous week, a decrease of 20,633 cars or 2.3 per cent below the corresponding week last year, and an increase of 5,933 cars or 0.7 per cent above the comparable 1943 week.

Loading of revenue freight for the week ended July 7 totaled 726,404 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ending Saturday, July 7

District	1945	1944	1943
Eastern	132,286	131,549	151,558
Allegheny	159,855	167,460	175,040
Pocahontas	35,952	39,608	56,204
Southern	103,512	100,811	109,143
Northwestern	110,155	112,415	128,293
Central Western	117,227	121,682	118,709
Southwestern	67,417	70,822	69,683
Total Western Districts	294,799	304,919	316,685
Total All Roads	726,404	744,347	808,630
Commodities			
Grain and grain products	54,932	51,120	54,809
Live stock	10,895	11,322	11,150
Coal	117,951	123,962	164,803
Coke	13,255	13,682	12,956
Forest products	31,591	33,253	37,226
Ore	69,743	75,146	89,309
Merchandise,l.c.l.	93,442	91,108	89,574
Miscellaneous	334,595	338,754	348,803
July 7	726,404	744,347	808,630
June 30	893,741	897,210	852,082
June 23	876,442	880,311	760,930
June 16	872,674	877,493	868,286
June 9	884,285	873,174	854,486
Cumulative Total, 27 Weeks	21,988,349	22,029,548	21,140,007

In Canada.—Carloadings for the week ended July 7 totaled 63,390 as compared with 72,171 for the previous week and 71,405 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total Cars in Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
July 7, 1945	63,390	35,914
July 8, 1944	71,405	36,831
Cumulative Totals in Canada:		
July 7, 1945	1,830,636	999,143
July 8, 1944	1,862,465	1,058,845

I. C. C. Reopens Seaboard Truck Operations Cases

The Interstate Commerce Commission has reopened its No. MC 86687 proceedings, involving applications of the Seaboard Air Line for authority to extend highway operations over various routes parallel to segments of its railroad lines between Richmond, Va., and Tampa, Fla., upon consideration of the recent Supreme Court decision in the *American Trucking Associations vs. I. C. C.* case, in which, as noted in *Railway Age* of June 23, page 1114, the court ruled that the certificates in the proceedings were issued erroneously because the commission and the joint boards involved had excluded certain "competent and material evidence."

The commission's order referred the proceedings to Division 5 for "administrative handling and determination," and the division assigned them for further hearing at a time and place to be fixed later.

Prepare Giant Boondoggle Plan for Mo. Valley

The Interior Department has announced that it is busy spending an appropriation of $3,200,000 for the preparation of plans for the outlay of $1½ billion of taxpayers' money for the Missouri Valley for "irrigation, hydro-electric power, flood control, erosion abatement, improvement of the navigability of the Missouri River, and the creation of recreational opportunities."

The Department is not stopping with plans merely for physical plant but is making "economic and related studies" to enable it more effectively to supervise the affairs of the natives of the region—for example, what size farm units should be in the area, what kind of recreational opportunities the local citizenry should have, and a compilation of the alleged "beneficial effects" which the project should have on "non-rural life and work in the area affected."

600-Hp. Diesel Switcher

First production units of a 70-ton Diesel-electric locomotive suitable for both yard duty and road service are nearing completion at General Electric's Erie, Pa., works. The locomotive will be rated 600 hp., and have a top speed of 55 m.p.h. It has a high ratio of horsepower per ton for a medium-weight unit and will round out the Alco-G. E. lines, fitting between the heavier 660- and 1,000-hp. switchers and the 380-hp., 44-ton unit.

The locomotive is designed for yard switching, scheduled road hauls, and transfer work, and is adequately powered for passenger-station switching and light-traffic passenger service. Because of its light weight, it can be used for freight and passenger service on railroad lines where roadbed and rail weight require limited axle loadings.

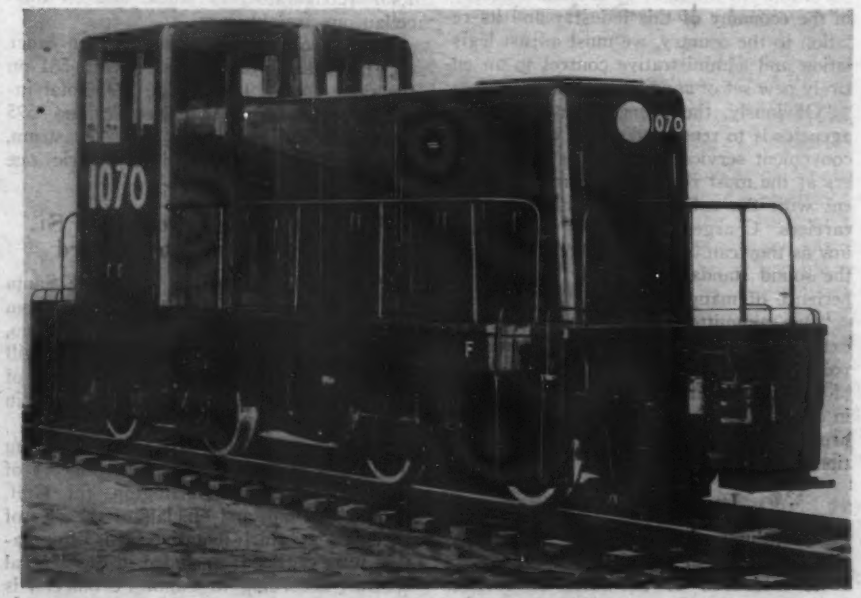
It is powered by a six-cylinder Diesel engine rated 660-hp. at 1000 r.p.m. The four motors and generator making up the electric drive were specifically designed for the new locomotive on the same basic principles used for larger Alco-G.E. units.

Birthday Greetings to Lea

Chairman Clarence F. Lea of the House committee on interstate and foreign commerce had a birthday July 11, and his colleagues paid tribute to him in speeches on the floor of the House. The Congressional Directory shows that Representative Lea, a Democrat, was born July 11, 1874, in Lake County, Calif.; and he has represented California's first district for 28 years, receiving the Republican endorsement in most of his campaigns for reelection.

The House's attention was called to Mr. Lea's birthday by Representative Bulwinkle, Democrat of North Carolina, who called the Californian "a fine chairman and a great member of the House or Representatives." Mr. Bulwinkle added that he knew every member of the interstate commerce committee joined him in wishing Mr. Lea "many happy years and many years of continuous service for the country." Another member of the committee, Representative Priest, Democrat of Tennessee, expressed as his own sentiment what he recalled was said recently by Representative Halleck of Indiana, a Republican member of the committee—"If I could not have had my own daddy, I would have wanted Mr. Lea."

Representative Voorhis, Democrat of California, followed Mr. Priest to offer congratulations to Mr. Lea on behalf of the



70-Ton Diesel-Electric Locomotive for Yard Duty and Road Service Under Construction at the Erie, Pa., Works of the General Electric Company

California delegation. "I suppose," said Mr. Voorhis, "that I could not pay a higher tribute than to say that he is beloved by every member of the delegation, and quite as much by those who do not always agree with him as he is by those who do. I feel that we are most fortunate in our delegation to have him as the dean and leader of our group."

Lea Announces Plans for Transport Study

(*Continued from page 112*)

General Transportation Problem—Continuing, Mr. Lea recalled that a quarter of a century ago, when Congress approached the task of turning the railroads back to their owners after federal control, the transportation problem was "mainly a railroad problem." He added that it is now a "general transportation problem"—the problem of "coordinating different types of transportation with a view to best serving the interests of the nation and with fairness to the competing agencies." Indicating briefly the present extent of the country's rail, water, highway, pipe line, and air transport facilities, the chairman said that all agencies have made a wartime demonstration of their ability "to perform a great service to our nation." He is confident that they will yet perform a "more highly perfected service" if the regulatory system is perfected in a way to aid them.

"To a very large extent," Mr. Lea went on, "all of these forms of transportation have been developed without proper coordination with each other. Each has its own economic problems; each is highly competitive with the others; yet each is a useful part of our transportation system.

"The public is paying a tremendous bill for all of these services, both through direct charges and taxation. The services of all these agencies intimately touch the daily life of every citizen. . . . . This nation cannot prosper and can scarcely exist without an adequate and efficient system of transportation. In the light of profound changes in the economy of this industry and its relation to the country, we must adjust legislation and administrative control to an entirely new set of conditions.

"Obviously, the primary function of all agencies is to render adequate, efficient, and convenient service for shippers and travelers at the most reasonable charges consistent with the enlightened treatment of the carriers. Charges for services should be as low as they can be made without sacrificing the sound standards evolved from the experience of many years.

"Our committee is fully conscious of the extreme complexity of the problems involved in this situation and the difficulties of their solution. Our hope and purpose in engaging in this survey of transportation problems are summarized in the resolution. . . ."

June Ton-Miles

The volume of freight traffic handled by Class I roads in the first six months of 1945, measured in ton-miles of revenue freight, was slightly less than that moved in the same period in 1944, according to the Association of American Railroads. Traffic in the first half of the current year totaled approximately 366,337,903,000 ton-miles, compared with 368,733,822,000 ton-miles, or a decrease of 0.6 per cent.

June traffic amounted to 63,600,000,000 ton-miles, it was estimated on the basis of reports so far received. This was an increase of 3.1 per cent compared with June, 1944, and an increase of 10 per cent compared with the same month in 1943. The amount of traffic handled by the Class I roads in June this year was almost 2½ times the volume carried in June, 1939.

The following table summarizes revenue ton-mile statistics for the first six months of 1945 and 1944:

	1945	1944	Per cent change
First 4 months	238,137,903,000	242,748,437,000	−1.9
May ...	*a* 64,600,000,000	64,270,148,000	+0.5
June ...	*b* 63,600,000,000	61,715,237,000	+3.1
Total 6 months	366,337,903,000	368,733,822,000	−0.6

a Revised estimate.
b Preliminary estimate.

Equipment Installed and Ordered

Class I railroads put 21,948 freight cars in service in the first six months this year, according to the Association of American Railroads. In the same period last year 15,431 freight cars were installed. Those put in service in the first half of this year included 9,352 box, of which 8,765 were plain and 587 were automobile box cars; 3,561 gondola, 7,215 hopper, 380 flat; 1,133 refrigerator, 220 stock, and 87 miscellaneous cars.

Class I roads put 315 new locomotives in service in the first six months of 1945, of which 52 were steam and 263 were diesel-electric. Locomotives installed in the same period last year totaled 494, including 190 steam, one electric, and 303 Diesel-electric.

New freight cars on order on July 1 totaled 29,402, compared with 41,236 on July 1, 1944. The former figure included 18,914 box, of which 16,524 were plain box cars and 2,390 were automobile box cars; 4,425 gondola, 3,625 hopper, 932 flat, 1,437 refrigerator, 19 stock, and 50 miscellaneous freight cars.

They also had 508 locomotives on order on July 1 this year compared with 581 on the same day in 1944. The 1945 total included 111 steam, two electric and 395 Diesel-electric, compared with 179 steam, two electric and 400 Diesel-electric one year ago.

Santa Fe Operation Into St. Louis Planned by Board

Plans of the Atchison, Topeka & Santa Fe to operate into St. Louis, Mo., from Kansas City by using tracks of the Chicago, Burlington & Quincy and of the Alton, will be discussed by the board of directors of the Santa Fe at a meeting to be held in Chicago on July 26.

This was disclosed last week following a meeting at St. Louis between officers of the Santa Fe, the Burlington, the Gulf, Mobile & Ohio, and officials of the city of St. Louis at which tentative plans of operation were outlined. Included in the general scheme, according to Santa Fe officers, is a joint operation of the Santa Fe and the Burlington on the line of the Alton between Kansas City and Mexico, Mo., and on the line of the Burlington between Mexico and St. Louis. Entry of the Burlington into St. Louis would also be improved by the plan, it was said. The G. M. & O., entered into the discussion because of the merger of that road and the Alton which awaits approval of the federal court and the Interstate Commerce Commission.

Overton in History Chair at N. W. Univ.

(*Continued from page 112*)

House (Harvard), and instructor in history at Amherst. Dr. Overton also worked for two years in the foreign department of the Chatham-Phoenix National Bank in New York.

In 1936 he spent a month in the service of the Burlington as investigator of old records, and in 1939 he entered regular employ of that company as executive assistant, becoming research director in 1942 and superintendent of the relief department in 1943.

In 1940, Dr. Overton's first work on Burlington history was published—entitled "The First Ninety Years: an Historical Sketch of the Burlington Railroad." In 1941 his authoritative 600-page volume, "Burlington West: a Colonization History of the Burlington Railroad," was published by Harvard University Press. Since that time Dr. Overton has contributed to other books and learned journals in the field of economic history, and he is an active member of the leading associations of professional historians.

F. E. P. C. Gets Appropriation; O. D. T. Funds Also Approved

The Fair Employment Practices Committee got a new lease of life on reduced rations when Congress last week gave it a compromise appropriation of $250,000, thus resolving the controversy which had held up the National War Agencies Appropriation Bill, carrying fiscal 1946 funds for the Office of Defense Transportation and other home-front war activities. As noted in the *Railway Age* of July 7, page 38, O. D. T. has been receiving funds since the close of the last fiscal year under stop-gap legislation which provided that appropriations contained in any regular appropriation bill not enacted by July 1 would nevertheless be available from that date.

The appropriation originally proposed for F. E. P. C. was $446,200, but this was cut by the Senate to $250,000 after a filibuster staged by Southern senators who wanted the agency liquidated. After some jockeying around, the House accepted the $250,000 with some compromise language stipulating that while the appropriation is "for completely terminating the functions and duties" of F. E. P. C. it is at the same time available for continued operation "if and until" the agency is continued in existence by act of Congress.

Senate acceptance of this language and other House amendments completed Congressional action on the measure July 13. In a July 12 Senate discussion of the F. E. P. C. item, Chairman McKellar of the committee on appropriations told some questioning senators that the House language

did not change the Senate provision, i.e., that F. E. P. C. has an appropriation for continuing its activities during the current fiscal year ending June 30, 1946.

In the House debate on the item Representative Brooks, Democrat of Louisiana, recalled F. E. P. C.'s long-pending complaint against southern railroads and the railroad labor organizations, for alleged discrimination against negroes. He called that action one of the agency's "greatest blunders." This is the case which was finally sent to the late President Roosevelt's special committee headed by Walter P. Stacy, chief justice of the Supreme Court of North Carolina. As noted in the *Railway Age* of June 9, page 1023, F. E. P. C. is still waiting for the report of the Stacy committee, which was appointed on January 3, 1944.

The final version of the bill appropriates $7,350,000 for O. D. T. operations during fiscal 1946. This is $350,000 more than the House originally approved, but it is also $350,000 less than the $7,700,000 recommended by the Bureau of the Budget and originally approved by the Senate. The provision authorizing payment of a $10,000-a-year salary to the O. D. T. deputy director was retained, but the Senate version's provision authorizing $9,000 salaries for two assistants was eliminated.

Rates on New Automobiles Will Get Further Study

The effective date of the Interstate Commerce Commission's order in its No. 28190 proceeding, which involves rules and practices applying to the transportation of new automobiles (as outlined in *Railway Age* of March 3, page 426), has been indefinitely postponed by the commission, subject to further order. Prior postponements had been ordered, the most recent of which fixed September 5 as the effective date of the order.

Upon petitions of various carriers in the Western district, Southern territory and Official territory, the proceeding has been reopened for reconsideration with respect to reasonable minimum weights, reasonable maximum rates, and their relation to first class scale rates, on carload shipments of new automobiles throughout the United States, and the parties have been granted until August 17 to submit specific proposals concerning these questions.

Richberg Warns Unions Against Shortsighted Policies

Donald R. Richberg was quoted by the Associated Press last week as saying in an address at Roanoke, Va., that "those so-called leaders of labor who keep perpetually demanding more pay for less production in shorter hours are leading their followers down hill and into the swamps."

In addition to this objectionable goal which characterizes some but not all labor unions, Mr. Richberg was quoted also as condemning the opposition by some leaders of organized labor to having "a legal obligation imposed on both employers and employees to settle labor controversies amicably"; and he decried "the folly of trying to make it illegal for employers and employees to exercise a freedom of choice as to their associates"—apparently having in mind some of the "non-discrimination" legislation such as has been adopted in New York and other states and which is usually opposed by some of the railway labor organizations.

"The only way whereby a policy of higher wages and lower prices can be maintained," he said, "is through increasing the productivity per man-hour of labor. Therefore shortened hours and higher pay, with no increased productivity, bring nothing but inflation."

The speaker went on to say that "probably these criticisms will put me in the doghouse reserved for reactionaries and renegades, despite the long years of service I have given to the cause of organized labor."

It will be remembered that, before entering government service in the early days of the Roosevelt regime, Mr. Richberg served for a considerable period as counsel for the railroad brotherhoods.

Ask Postponement of Class Rate Changes

(Continued from page 113)

ritory class rates should be increased. Such action, they said, will discriminate against Official territory, and "improperly disregards the economic effect of such an increase on the North and on the country as a whole." Furthermore, said this petition, opportunity for further argument is justified because the commission, departing from its ordinary procedure, issued no proposed report in the No. 20300 proceeding, with the result that Official territory interests had no opportunity to analyze the effect of the unexpected increase in class rates in that territory until the formal report and order was issued. In view of the immense importance of the case to all sections of the country, it is particularly in the public interest, these petitioners said, that the commission should hear their appraisal of the commission's findings as they affect Official territory.

Club Meeting

Four motion pictures will be shown when the Railroad Enthusiasts, Inc., meet at 7:45 p. m., July 25, in Room 5928, Grand Central terminal, New York. Two Canadian Pacific films will be shown, both in color and sound. One, called "Coast to Coast," is a three-reel trip across the Dominion from Halifax to Vancouver, and the second is a film of "Banff and Lake Louise."

In addition, there will be a showing of a fan trip over the "Canal Road" in Connecticut (built along the route of the New Haven and Northampton Canal, in 1848, the road is now used only for freight). The fourth film, which the Enthusiasts suggest is "good for a laugh," is the old-timer, "The Great Train Robbery."

To Allow New Truck Operations

The Office of Defense Transportation hereafter will permit the inauguration of new local motor carrier operations involving one used light or medium truck when such additional service will not affect programs for conservation of truck transportation facilities. The change in regulations will also permit existing local motor carriers whose operations were frozen on October 25, 1943, to extend their operations under certain circumstances.

Under former O. D. T. regulations, new or extended operations were not approved unless the applicant could show that the service was "necessary to the war effort or to the maintenance of essential civilian economy."

May Accident Statistics

The Interstate Commerce Commission on July 14 made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for May and the first five months of 1945, compared with the same 1944 periods. The compilation, which is subject to revision, follows:

	Month of May		5 months ended with May	
Item	1945	1944	1945	1944
Number of train accidents*	1,360	1,418	7,465	6,921
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	145	137	582	527
Injured	129	106	463	433
Passengers on trains:				
(a) In train accidents*				
Killed	2	...	3	7
Injured	94	39	665	499
(b) In train-service accidents				
Killed	2	4	22	22
Injured	214	235	1,012	1,127
Travelers not on trains:				
Killed	2	...	4	5
Injured	73	59	488	438
Employees on duty:				
Killed	58	88	378	448
Injured	3,686	3,866	19,501	18,828
All other nontrespassers:**				
Killed	142	116	851	872
Injured	520	456	3,044	2,926
Total—All classes of persons:				
Killed	351	345	1,840	1,881
Injured	4,716	4,761	25,173	24,251

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers*, were as follows:

Persons:				
Killed	130	99	784	780
Injured	307	235	1,797	1,765

Would Simplify Debt Adjustment by Holders' Consent

Senator Wheeler, Democrat of Montana and chairman of the Senate committee on interstate commerce, at the request of the Interstate Commerce Commission has introduced a bill (S. 1253) to provide for the avoidance of judicial reorganization proceedings, where railroads are unable to meet maturities or interest charges, by establishing a method for the postponement or reduction of such payments, under commission supervision, similar to the "escape clause" which the commission has been including in some recent reorganization plans approved by it.

The commission had indicated its possible interest in this legislation in its 57th Annual Report, as noted in *Railway Age* of January 15, 1944, page 201. This measure would supplement the provisions of the existing statute (the so-called McLaughlin Act) for debt adjustments by consent of

creditors without section 77 proceedings, by adding to the Interstate Commerce Act a new section, to be designated section 20(b), to accomplish the purpose of the "escape clause."

The commission's views were set forth in a letter to Senator Wheeler from Commissioner Splawn, chairman of its legislative committee, in which he said: "The Congress is cognizant of the deterioration of service and decrease of employment which usually occur whenever a carrier begins to experience substantial loss of traffic and revenues. This, in no small measure, is caused by the necessity for the carrier to meet its fixed charges or else to face the prospects of receivership or a judicial reorganization under section 77 of the Bankruptcy Act. The financial structures of many carriers were, and in some instances still are, such as to require a thorough rearrangement of their financial and corporate structures. On the other hand, instances arise where drastic reorganization is neither necessary nor desirable. Although the financial difficulty of a carrier may be temporary, when such a condition becomes known, it produces a very unfavorable effect on its credit and the marketability of its securities. This arises from the uncertainty or fear that certain classes of securities may be totally eliminated and others drastically modified in the event of judicial reorganization.

"By reason of the fact that the securities of most carriers are widely held, and for other reasons, it usually is not feasible to effect a voluntary financial reorganization which requires the consent of all of the holders of the carriers' bonds or even of all of the holders of individual issues. Recognition of this fact brought about the enactment of the McLaughlin bill. While this statute has afforded relief in certain instances, proceedings thereunder are of necessity quite prolonged and expensive. Moreover, while the unfavorable effects experienced by such proceedings are not as pronounced as in the case of reorganization under section 77 of the Bankruptcy Act, the relief which may be afforded thereby is offset in other respects.

"The objections to effecting financial readjustments under the methods above referred to could, in numerous instances, be eliminated if there existed a medium through which a carrier, with the consent and cooperation of the majority of all of its bondholders, or in some instances, with the consent of a majority of the holders of individual classes of its securities, could modify its obligations, for example, by postponing or reducing the payment of interest charges or by extending the maturity of some or all of its bonds."

Under this amendment the commission would be required, upon application and after hearing, to find that the proposed debt adjustment is within the scope of the law, in the public interest, in the best interests of the carrier and of the holders of each class of its obligations involved, and not adverse to the holders of any other class of its security holders or to any other creditor. Thereafter the adjustment plan would be submitted for the approval of holders of each class of securities affected, to become effective, in general, upon acceptance by 75 per cent of the outstanding principal amount of each class. Various safeguards are provided, while "expedition and economy" greater than existing legislation affords would be attained, the commission suggested, by making the authority conferred under the amendment "exclusive and plenary," leaving the carrier who has secured such authority in a position to proceed without obtaining additional authority under other parts of the Interstate Commerce Act or the approval of state regulatory bodies.

Name Panel Board in Express Drivers' Disputes

Chairman H. H. Schwartz of the National Railway Labor Panel has named an emergency board to serve in disputes over an increase in wages between the Railway Express Agency and certain of its employees in New York and in places other than New York who are represented by the International Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of America. The board is required to make separate findings and recommendations in the New York case and the case involving other cities, following an investigation to commence at New York July 26. Walter P. Stacy, I. L. Sharfman and John A. Lapp, members of the Railway Labor Panel, were named to the board.

Commission Dismisses Another Discrimination Complaint

Finding that the Texas & Pacific accorded "substantial equality of service with respect to the use of dining facilities" upon the occasion upon which Yolanda Barnett, a negro passenger, based a complaint alleging undue or unreasonable prejudice, Division 2 of the Interstate Commerce Commission has dismissed the complaint, taking the position that the road's "present rules and practices regarding the use of such facilities by colored passengers are not unduly prejudicial."

The circumstances of the case were outlined in the *Railway Age* of March 24, page 563, where the recommendation of Examiner J. Edgar Snider that the complaint be dismissed was noted.

Supply Trade

W. O. Bates, Jr., vice-president of the **Caterpillar Tractor Co.**, Peoria, Ill., has moved his office to San Leandro, Cal., where he assumes full-time administrative responsibilities as manager of the Caterpillar offices and plant at that point.

F. M. Gunn, manager of the Pullman Car Works of the **Pullman-Standard Car Manufacturing Co.,** has been promoted to assistant to the president, with headquarters as before at Chicago. **Harry B. Reed,** assistant manager of the plant, has been advanced to manager, succeeding Mr. Gunn.

James Macdonald, since 1939 assistant to the vice-president—sales of the **General Steel Castings Corporation,** has been appointed assistant to president. Mr. Macdonald was reported incorrectly as having been appointed assistant vice-president in the *Railway Age* of July 14, page 78. **Karl S. Howard** has been appointed assistant vice-president. In addition to his present position as general mechanical superintendent, Mr. Howard will assume the duties of general purchasing agent.

George M. Dallas has been appointed office manager of **Stanley H. Smith & Co.,** Cleveland, O. Mr. Dallas formerly was assistant vice-president of the Cleve-

George M. Dallas

land Trust Company. He attended Ohio State University and Baldwin-Wallace College and attended and later taught at Cleveland College. He joined the corporate trust department of the Cleveland Trust Company in 1926. He was transferred to the loan department of the terminal office in 1932 and subsequently promoted to assistant manager of that office, assistant treasurer and then assistant vice-president.

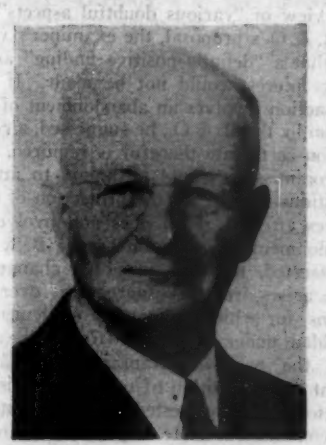
Russell J. Wittmer has been appointed Philadelphia, Pa., district sales manager for the **National Malleable & Steel Castings Co.** to succeed **Edward O. Warner** whose retirement was reported in the *Railway Age* of July 14. Mr. Wittmer has been sales agent in the southeastern territory with headquarters in Washington,

Russell J. Wittmer

D. C. His engineering and sales activities with government and foreign agencies will be continued from the Philadelphia office. After serving in the last war, he was graduated from the Case School of Applied Science, Cleveland, Ohio, in 1920, and has been associated with National Malleable since then. He was sent to Europe on an

engineering assignment in 1923. He has been in the railway sales division since 1941.

William M. Blackmore has been appointed southeastern district sales manager. Mr. Blackmore has been employed in the general office engineering department in Cleveland, where he has been connected with the development of railroad specialties. He joined National Malleable's engineering department in 1906 and later was assigned



William M. Blackmore

to the inspection and test department. He was appointed chief draftsman in 1913, assistant superintendent of the steel castings plant at Sharon, Pa., in 1918, and returned to the engineering department in 1931.

John A. MacMillan has retired as chairman of the board of the **Dayton Rubber Manufacturing Company.** During the past 35 years, Mr. MacMillan, a co-founder of Dayton Rubber, has served as general manager, president and chairman of the board. He will continue as a director.

John T. Tarpey, western representative of the Pittsburgh Spring & Steel Co., has been appointed to the sales staff of the Chicago office of the **American Locomotive Company.** Mr. Tarpey joined the Chicago office of Pittsburgh Spring & Steel in 1916. After military service during the last war, he returned to the company in 1919 and was appointed western representative in 1934.

The **Aro Equipment Corporation,** Bryan, Ohio, has appointed the following four new jobbers to handle its line of industrial pneumatic tools under the supervision of the local division managers in the respective territories: **C. S. Kegerreis Supply, Inc.,** Elkhart, Ind., under the supervision of Clark & Osborne; the **Western Iron Stores Company,** Milwaukee, Wis., under Charles D. Haven, Jr.; the **General Supply Company,** Kansas City, Mo., under W. L. Etherton; and **Overton and Ross, Inc.,** Wichita Falls, Tex., under W. F. Vogel.

J. F. Campbell has been appointed chief development engineer, **Ralph Erskine** assistant development engineer, and **R. W. Phillips** laboratory director of the **Weatherhead Company,** Cleveland, Ohio. Mr. Campbell joined the Weatherhead Company earlier this year from the Holley Carburetor Company, Detroit, Mich., where he was director and chief engineer of the Fuel Injection division. Mr. Erskine has been a member of the company's development engineering staff and Mr. Phillips joined the engineering staff in 1941 and was appointed in charge of the hose division.

Daniel E. Noble has been promoted to general manager of the communications and electronics division of the **Galvin Manufacturing Corporation** of Chicago. In his new position he will supervise the engineering, sales and engineering production departments of the division while retaining his present responsibilities as director of research. Mr. Noble worked in the radio field through his engineering training at Connecticut State College and the Massachusetts Institute of Technology. He continued in radio work as a consultant while teaching in the School of Engineering of Connecticut University. During 1937-1939, he developed Connecticut's first FM commercial broadcast system with F. M. Doolittle of WDRC. He also developed the first FM police system and the first statewide police 2-way system for Connecticut, completing it in 1940. He has been director of research for the Galvin Manufacturing Corporation since 1940. He is one of the members of the F. C. C.-Radio Industry engineering committee appointed to study the FM broadcast allocation propagation problem.

TRADE PUBLICATIONS

The *James G. Biddle Company,* Philadelphia, Pa., has issued an 8-page illustrated bulletin entitled "Midget Megger Insulation Tester" which describes and gives the characteristics of the small 500-volt d. c. self-contained testers now being built in the United States by the company.

Structural Design Standards for Lumber. —The National Lumber Manufacturers Association, Washington, D. C., has published a first edition of a 64-page booklet entitled, "National Design Specification for Stress-Grade Lumber and Its Fastenings." This specification is intended for application in structures where strength is the major consideration and applies to stress-grade lumber and its fastenings when the lumber is properly identified as to grade. It is based on and recognizes the value of competent engineering design, accurate fabrication and adequate supervision of construction, and was compiled after several years' work, in which the most reliable and up-to-date data available from laboratory tests and practical experience were carefully analyzed. The specification is intended to serve as a basic document, and, in addition to stating the conditions under which its provisions should be applied, and under which the design procedures and formulas given should be used, lists the allowable design stresses for commercial stress-grades of lumber and the allowable design loads for various types of fastenings. The material is logically arranged and well cross-referenced for ease in finding specific data and provisions.

Equipment and Supplies

Two Railroads Order Equipment Totaling Twelve Million

As a means of providing faster schedules and over-night service between St. Louis, Mo., and Dallas, Tex., Ft. Worth and Houston by the introduction of lightweight trains operated by Diesel-electric locomotives, the Missouri Pacific and the Texas & Pacific have jointly ordered new equipment at a total cost of $12,000,000. The new equipment will also replace the steam-drawn "Sunshine Special" trains which are operated by the two roads from St. Louis and Memphis, Tenn., to the Southwest.

One hundred new passenger cars have been ordered, of which 47 are to be sleeping cars built by the Pullman-Standard Car Manufacturing Company, while the remainder will be constructed by the American Car & Foundry Co.

Fifty-six of the cars, including 28 sleeping cars, are being bought by the Missouri Pacific and 44, including 19 sleeping cars, by the Texas & Pacific. Order was also placed with the Electro-Motive Corporation for four 4,000-hp. and three 2,000-hp. Diesel-electric locomotives, all for the Missouri Pacific with the exception of one 4,000-hp. engine purchased by the Texas & Pacific. Construction will be commenced as soon as use of materials is authorized by the War Production Board and it is expected the trains will be ready for delivery late in 1946. All passenger-carrying cars will have low-alloy high-tensile steel underframes with superstructures of aluminum alloy. Mail, baggage and express cars are to be built of low-alloy high-tensile steel throughout.

The new lightweight trains and Diesel-electric locomotives will permit of faster schedules and will provide over-night service between St. Louis-Memphis and Dallas, Fort Worth and Houston and a before-noon arrival in San Antonio. Considerable reduction in New Orleans-El Paso schedules are also contemplated.

In appearance the new trains will resemble the Colorado and Missouri River "Eagles" of the Missouri Pacific and, with the inauguration of the new equipment, the name of the "Sunshine Special" will be changed to the "Sunshine Eagle."

Additional orders are to be placed later by the Missouri Pacific for two more lightweight trains at an estimated cost of $1,225,000. They will operate between Houston, Tex., Corpus Christi and Brownsville with schedules so arranged as to provide connections in each direction at Houston with the "Sunshine Eagles."

FREIGHT CARS

The Baltimore & Ohio has requested bids on from 1,000 to 2,000 steel hopper cars of 50 tons' capacity.

The Erie has ordered 600 steel 70-ton drop-end gondola cars from the Bethlehem

Steel Company and 100 steel 70-ton covered hopper cars from the Greenville Steel Car Company. These are in addition to 700 50-ton box cars ordered from the American Car & Foundry Co. (reported in *Railway Age* of June 30). Delivery of the 1400 cars is expected in the first quarter of 1946.

LOCOMOTIVES

The H. K. Porter Company has announced receipt of an order for 47 steam locomotives of 0-6-0 wheel arrangement from the WAR DEPARTMENT. The locomotives are scheduled for China, Burma and India.

SIGNALING

The CANADIAN PACIFIC has ordered materials from the General Railway Signal Co., to install absolute permissive block signaling on one track of the 31.5 mile double-track road between Ft. William, Ont., and Finmark.

The NORTHERN PACIFIC has ordered two unit-wire control machines from the General Railway Signal Co. These are table top mounting machines with illuminated track diagrams and 12 by 12-in. panels. One machine has two levers for the control of a power switch and signals at Lester, Wash. The other has three levers for the control of a power switch and signals at Easton, Wash. Equipment to be used will include Model 5D switch machines and Type SA signals.

The NASHVILLE, CHATTANOOGA & ST. LOUIS has placed an order with the Union Switch & Signal Co., for materials necessary to install a relay electric interlocking at Junta, Ga., involving a control machine, P-5 high signals, a N-A dwarf signals, M-2 high voltage electric switch machines and housings. The machines will also control the functions at the end of the passing siding North of the interlocking. Field work will be done by company forces.

The NORFOLK & WESTERN has placed orders with the Union Switch & Signal Co., for nine Model 31 electro-pneumatic car retarders to replace 10 retarders of an older type that have been in service since 1928 in the westbound coal classification yard at Portsmouth, Ohio. Four of the new retarders will be 43-ft. 8-in. in length, and five will be 31-ft. 2-in. long, a total of 661 rail feet of retarder. The field work will be done by regular construction forces of the road.

Construction

BALTIMORE & OHIO.—This railroad has awarded a contract for alterations and repairs to the Y. M. C. A. building in Benwood, W. Va., at estimated cost of $25,000, to the Steiner Construction Company of Baltimore, Md.

Financial

BALTIMORE & OHIO.—*Plan Wins Consent.*—On July 11 a three judge federal court at Baltimore, Md., tentatively approved the B. & O.'s debt adjustment plan after a two-day hearing and scheduled a final hearing for September 17.

BALTIMORE & OHIO. — *Detroit-Toledo Trackage Rights.*—In a proposed report, Examiner Ralph R. Molster has recommended that the Interstate Commerce Commission deny this road's application for authority to operate passenger, mail and express trains under trackage rights over the New York Central's line from Toledo, Ohio, to Detroit, Mich., in lieu of the joint arrangement, which expired June 7, under which the Pere Marquette has provided power and crews for the movement of such trains over its route between the two points, a portion of which is over lines of other carriers.

As noted in *Railway Age* of April 14, page 686, and April 28, page 776, the B. & O. contended that the proposed new arrangement had certain operating advantages, that it had no responsibility for the protection of any Pere Marquette employees who might be adversely affected, and that the expense of operation probably would be no greater than under the modified terms which the Pere Marquette had indicated it would require for a renewal of the joint agreement. The Railway Labor Executives Association, the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Engineers intervened to urge the commission to provide for the protection of Pere Marquette employees if the application should be granted. It was estimated that 22 train and engine service employees and 80 or 90 others might be affected if the joint operation should be discontinued, as the Pere Marquette had obtained state authority to discontinue operation to and from Detroit of the trains it operated under the joint arrangement if the B. & O. should cease to deliver them to it at Toledo. (Pending I. C. C. action on the application, operation by the Pere Marquette has been continued since the agreement expired June 7.)

The examiner held that five questions of law were involved in the proceedings, namely: (1) whether the transaction amounts to the B. & O.'s abandonment of an operation; (2) whether the trackage rights operation on the N. Y. C. would be an extension of its lines; (3) whether the P. M. is a "carrier" affected by the transaction; (4) whether the interest of railroad employees will be affected; and (5) whether conditions must be prescribed for the protection of affected employees.

After reviewing the views of the parties as to the question of abandonment of operation, the examiner held that the matter was one for determination by the courts. With respect to the other issues, his report set forth 11 recommendtions, leading up to his conclusion that the application should be denied as "not shown to be consistent with the public interest." Among other recommendations, the examiner held that the proposed trackage rights arrangement with the N. Y. C. comes within the scope of section 5(2) of the Interstate Commerce Act; that the transaction "involves" the Pere Marquette; that the interests of "railroad employees" would be affected by an order under section 5(2) approving the transaction; and that the "mandatory provisions" of that section "require that terms and conditions for the protection of affected railroad employees be included in such orders without exception or exemption."

In view of "various doubtful aspects" of the B. & O.'s proposal, the examiner's view was that a "definite positive finding" as to public interest could not be made. If the transaction involves an abandonment of operation by the B. & O., he suggested, a commission certificate therefor is required, and the commission would be bound to attach conditions thereto for the protection of employees affected. If it does not involve an abandonment of operation by the B. & O., he asserted, then the proposed change of route arises from a disagreement over divisions, for which a means of settlement is provided under section 15(6) of the act, "and the proposed transaction is tantamount to substitution of managerial discretion for functions vested by the statute in the commission." He expressed the opinion, also, that, while the P. M. performs the actual work of moving the trains between Toledo and Detroit, and participates in the revenue and expense arising therefrom, it does so for the B. & O.

Finally, "as a practical matter," the examiner would prefer to see the B. & O. and P. M. agree to continue operations under terms to be submitted to the commission or, failing such agreement after 90 days, under terms determined by the commission upon complaint by one of the carriers under section 15(6). In lieu thereof, he suggests that agreement be reached with "representatives of employees" under section 5(2)(f). Meanwhile, he remarks, "any threat to continued operation pending these developments may be dealt with by appropriate service order or, possibly, by appropriate action under section 1(20)," which provides for court proceedings against carriers, and their officers, where commission authority is not obtaned for abandoning or extending operations.

CENTRAL OF NEW JERSEY.—*Lease of Lines in Pennsylvania.*—The Central of Pennsylvania, which the Jersey Central controls through ownership of stock, has applied to the Interstate Commerce Commission for authority to acquire the personal property, other than cars and locomotives, of the parent road located in the state of Pennsylvania, and to lease and operate the lines and equipment heretofore operated in Pennsylvania by the Jersey Central, thus carrying a step further the program for segregation of operations outlined in *Railway Age* of March 3, page 436, the basic purpose of which is to meet a situation resulting from New Jersey tax laws. In order to complete the transaction, the Central of Pennsylvania at the same time asked for authority to issue to the Jersey Central 22,500 shares of capital stock of $100 par value, of which 15,000 shares would be in exchange for C. N. J. personal property acquired, and 7,500 shares would be sold at par for cash

to provide working capital for the Central of Pennsylvania. The major Pennsylvania lines of the C. N. J. have been operated by it under lease from the Lehigh Coal & Navigation Co., and arrangements have been made with that company for operation by the Central of Pennsylvania. Transfer of the Pennsylvania properties was authorized by the United States district court at Newark, N. J., on July 11.

CHESAPEAKE & OHIO.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this company to assume liability for $1,500,000 of 1½ per cent equipment trust certificates in connection with the purchase of 10 2-8-4 freight locomotives, class K, from the Lima Locomotive Works at $194,799 each. The certificates were sold to the Girard Trust Company and the Central Penn National Bank at 100.03, making the average annual costs to the road about 1.49 per cent.

DELAWARE & HUDSON.—*No Bids on New Issue.*—No bids were received by the Delaware & Hudson on July 17 on its new $50,000,000.00 issue of first and refunding mortgage bonds due 1980. After disclosing the lack of tenders, J. H. Nuelle, president, announced that the company had no current plans for re-offering the bonds. The Delaware & Hudson has no nearby maturity other than $10,000,000 of Albany & Susquehanna first mortgage 3½s due April 1, 1946.

DELAWARE, LACKAWANNA & WESTERN.—*Merger of Warren.*—This road has applied to the Interstate Commerce Commission for authority to merge the property of the Warren with its own, thus taking another step in its program for the acquisition of leased lines. Of the 36,000 shares of Warren stock outstanding, 32,278 shares are in the hands of the public; and the Lackawanna would finance their acquisition with an issue of $1,613,900 of Warren Division Mortgage Bonds. It also proposes to assume liability for $1,394,000 of Warren first and refunding gold mortgage bonds.

LOUISVILLE & NASHVILLE.—*Bonds.*—Division 4 of the Interstate Commerce Commission has authorized this company to issue $53,119,000 of series G 2⅞ per cent first and refunding mortgage bonds to mature in 2003. The proceeds and other funds are to be used to retire at 105 $24,654,000 of series E 3¼ per cent first and refunding mortgage bonds, due in 2003, and at 104, $28,465,000 of unified 50-year 4 per cent gold mortgage bonds due in 1960. (Previous item in *Railway Age* of June 23, page 1124.) Morgan Stanley & Company and others purchased the new issue at 97.669. A net saving of $12,608,205 in interest charges to maturity is expected to result from the transaction. The division's report pointed out that this road had reduced its total debt by $47,521,239 in the 10-year period ended with 1944, while increasing its investment in transportation property $88,716,422. Reductions of $14,775,000 in 1945 and of at least $9,500,000 in 1946 are anticipated. On completion of the refinancing just authorized, annual interest charges on funded debt and equipment obligations will total about $5,748,600, as compared to $10,792,167 at the end of 1924.

MISSOURI PACIFIC.—*Petitions to Retire Bonds.*—On July 13 T. C. Davis, chairman of the Missouri Pacific, announced that the executive committee had directed counsel to petition the district court for an order directing the trustee to retire $24,183,600 of outstanding St. Louis, Iron Mountain & Southern, River and Gulf divisions, 4 per cent bonds. It was stated that at March 31, 1945 debtor's cash position as reflected in only three of the several asset items stated was cash $21,374,975, temporary cash investments $91,244,000 and special deposits $2,911,137, a total of cash and equivalent of $115,530,113. Mr. Davis pointed out that should the Iron Mountain bonds be retired, there would be no other outstanding bonds senior to the first and refunding bonds. Speaking unofficially he declared that the reorganization plan has been outmoded by delays which have permitted the continued sharp accumulation of cash and that, in his opinion, the security holders will never vote for the approval of the present plan even should the plan be affirmed by the court.

NEW YORK, NEW HAVEN & HARTFORD.—*Reorganization.*—The Interstate Commerce Commission again has denied the Pennsylvania's petition for a further hearing, reconsideration and modification of the modified plan for this road's reorganization which the commission has approved (noted in *Railway Age* of May 26, page 962). The Pennsylvania had contended that the New Haven's circumstances have so changed since the close of the record upon which the commission's plan was based that modifications more favorable to it should be approved, and that the legal situation surrounding the reorganization justifies this action.

NORTHERN PACIFIC.—*Trackage Agreement.*—This company has applied for Interstate Commerce Commission approval of arrangements for its continuance of the use of the Great Northern's line from Snohomish, Wash., to Lowell, 5.7 miles.

PENNSYLVANIA.—*Awards Equipment Issue.*—The Pennsylvania has awarded its $10,290,000 issue of 1⅞ per cent equipment trust certificates, series Q, to Halsey, Stuart & Co. and associates on a bid of 100.12766. The certificates were re-offered on July 11 on a 0.90 to 2.10 per cent yield basis. (Previous item in *Railway Age* of July 7, page 48.)

TEXAS & PACIFIC.—*Awards Bonds.*—On July 11 the Texas & Pacific awarded $39,000,000 of 3⅞ per cent general and refunding mortgage bonds, series E, due 1985 to Halsey, Stuart & Co. and associates on a bid of 98.6399. The bonds were re-offered at 100½. Proceeds from the sale, together with treasury funds, will be applied to the redemption of all of the company's $40,956,000 of outstanding general and refunding mortgage 5 per cent bonds. (Previous item in *Railway Age* of June 16, page 1082.)

WESTERN PACIFIC.—*Refunding.*—This company has applied to the Interstate Commerce Commission for authority to issue $10,000,000 of series B 3 per cent first mortgage bonds due in 1974. This issue, together with treasury funds, is to be used to retire at 102½ an equal principal amount of 4 per cent first mortgage bonds of the same maturity date, issued upon consummation of the recent reorganization of this road.

UNION PACIFIC and the CHICAGO & NORTH WESTERN.—These roads have awarded a contract, amounting to $50,000, to the Fred H. Parker Construction Company, Omaha, Neb., for the alteration of the Fremont, Neb., passenger station. The work will include removal of the station's tower and the complete remodeling of the interior.

WICHITA FALLS & SOUTHERN.—*Extension of Notes.*—Division 4 of the Interstate Commerce Commission has approved the extension to January 1, 1948, of the maturity date of two notes of this road totaling $390,000, now due and payable to the estate of Frank Kell, with interest to be paid thereon at the rate of 2½ per cent.

WISCONSIN CENTRAL.—*Belt Railway Stock.*—Division 4 of the Interstate Commerce Commission has authorized this road to acquire for $240,000 the 2,400 shares of stock of the Belt Railway of Chicago heretofore held by the Minneapolis, St. Paul & Sault Ste. Marie, and thus to become a joint owner and user of the Belt's properties in lieu of the Soo Line. The Soo Line formerly controlled the Wisconsin Central by lease and through ownership of stock. Reorganization of the Wisconsin Central under Section 77 of the Bankruptcy Act is in progress. The Soo's lease was terminated in 1932, and it has since operated the Wisconsin Central as agent, while a large part of its stock in that road has been distributed to Soo Line security holders.

Average Prices Stocks and Bonds

	July 17	Last week	Last year
Average price of 20 representative railway stocks..	55.38	58.20	41.82
Average price of 20 representative railway bonds..	98.00	99.29	89.96

Dividends Declared

Chicago Great Western, — 5% preferred, 62½c, accum., payable September 28 to holders of record September 14.

Northern R. R. (N. H.).—$1.50, quarterly, payable July 31 to holders of record July 13.

Abandonments

CHESAPEAKE & OHIO.—The Railway Labor Executives Association and the Order of Railroad Telegraphers have asked the Interstate Commerce Commission to consider further its Finance Docket No. 14093 proceedings, involving a ferry abandonment by this company, so as to prescribe conditions for the protection of employees who may be adversely affected or to extend its reservation of jurisdiction in that respect for an additional 2-year period.

NEW YORK CENTRAL.—The Railway Labor Executives Association, Brotherhood of Locomotive Firemen & Enginemen, Order of Railway Conductors, and Brotherhood of Maintenance of Way Employees have asked the Interstate Commerce Commission to give further consideration to its

Finance Docket No. 14008 proceedings, involving a line abandonment by this road, either to prescribe conditions for the protection of employees who may be adversely affected or to extend its reservation of jurisdiction in that respect for an additional 2-year period.

Railway Officers

B. & O. Officers Now Serve B. & O. C. T. Also

Many general officers of the Baltimore & Ohio have now had their jurisdiction extended to cover the Baltimore & Ohio Chicago Terminal. The following B. & O. officers have been given this additional jurisdiction:

J. J. Cornwell, General Counsel
A. C. Clarke, Chief Engineer
C. B. Harveson, Chief Engineer Maintenance
A. K. Galloway, General Superintendent Motive Power and Equipment
W. B. Whitsitt, Chief Engineer Motive Power and Equipment
W. R. Hedeman, Engineer of Tests
W. C. Baker, General Superintendent Transportation
H. P. McQuilkin, Purchasing Agent
G. H. Dryden, Signal Engineer
A. S. Hunt, General Superintendent Communications
H. L. Denton, General Superintendent Police
F. J. Goebel, Director Personnel
C. M. McKeen, Manager Station Operations
G. W. Elste, Superintendent Safety
S. A. Wilson, General Supervisor Time Service
Dr. E. V. Milholland, Medical and Surgical Director
John Hewes, Jr., Superintendent Car Service
A. W. Conley, General Supervisor of Terminals
F. J. Young, Superintendent Police
G. P. Palmer, Regional Engineer Construciton and Maintenance
Harry Rees, Superintendent Motive Power
A. L. Doggett, Freight Traffic Manager
J. H. Carter, Superintendent Transportation

This move gives the Baltimore & Ohio Chicago Terminal, in effect, the status of another or fifth region of the parent company, and to that extent makes it conform with the B. & O. pattern of regional administration.

EXECUTIVE

Arthur R. Seder, general auditor of the Chicago & North Western, and comptroller of the Chicago, St. Paul, Minneapolis & Omaha at Chicago, has been elected a vice-president of the North Western, with the same headquarters, the position of general auditor having been abolished. Mr. Seder will continue as comptroller of the C. St. P. M. & O.

Robert E. Stevenson, whose promotion to assistant to the president of the Gulf, Mobile & Ohio, with headquarters at Jackson, Tenn., was reported in the *Railway Age* of July 7, was born at Grand Junction, Tenn., on July 5, 1905, and is a graduate of Washington and Lee University. He entered railway service on March 1, 1928, as a clerk in the freight traffic department of the Gulf, Mobile & Northern (now the G. M. & O.) at Mobile, Ala., and in the same year he was promoted to secretary to the general passenger agent, with the same headquarters. On November 1, 1933, Mr. Stevenson was appointed commercial agent at New Orleans, La., and in July, 1940, he was advanced to division freight traffic manager, with headquarters at Jackson. From April 19, 1942, to July 19, 1943, he served as military plant officer at Prairie, Miss., and on the latter date he was promoted to executive assistant at Jackson, the position he held at the time of his new appointment.

W. C. Pinschmidt, special engineer in the office of the vice-president of the Chesapeake & Ohio, has been promoted to engineering assistant to the vice-president with headquarters as before at Cleveland, Ohio. Mr. Pinschmidt was born at Baltimore, Md., and entered railroading in the office of the chief engineer of the Baltimore & Ohio there in 1911. After serving in various engineering capacities with that railroad and with the Norfolk & Southern at Norfolk, Va., Mr. Pinschmidt entered the service of the Chesapeake & Ohio in 1923 as assistant engineer, maintenance of way department, at Richmond, Va. He moved to Cleveland in March, 1933, and was attached to the office of the executive vice-president of the Chesapeake & Ohio, New York, Chicago & St. Louis, and the

W. C. Pinschmidt

Pere Marquette. He has been special engineer in the office of the assistant vice-president-assistant to the president and in the office of the vice-president since April, 1943.

Col. Benjamin Lamar Bugg, whose retirement on July 1 as president of the Atlanta, Birmingham & Coast at Atlanta, Ga., was announced in the *Railway Age* of June 23, was born at Palo Alto, Miss., on August 8, 1869, and entered railroading in 1888 as a telegrapher of the Florida Ry. & Navigation Co. and the Florida Central & Peninsular (now the Seaboard Air Line). In 1891 he was named agent of the Georgia Southern & Florida at Lake City, Fla., and in 1895 he became telegrapher and agent of the Central RR. & Banking Co. (now the Central of Georgia). He served as agent of the Savannah (Ga.) Terminals of the Central of Georgia and the Southern from 1901 to 1907, when he became general agent of the Old Dominion Steamship Co. (now the Eastern Steamship Lines); and in 1910 he was appointed traffic manager of the Norfolk Southern. Two years later he was named traffic manager of the Atlanta, Birmingham & Atlantic (now the Atlanta, Birmingham & Coast), serving also as assistant general manager, and vice-president and general manager until 1918, when he joined the United States Army as a lieutenant colonel of the engineers with the A. E. F. In 1920 Col. Bugg was named president and receiver of the Atlanta, Birmingham & Atlantic; and in 1927 he became president of the Atlanta, Birmingham & Coast, the position from which he has now retired.

FINANCIAL, LEGAL AND ACCOUNTING

A. H. Hogan, assistant auditor of the Grand Trunk Western at Detroit, Mich., has been promoted to auditor, with the same headquarters, succeeding **T. J. Gracey,** who has been transferred to Montreal, Que.

Julius W. Bourscheidt, auditor of the St. Louis Southwestern at St. Louis, Mo., has been promoted to treasurer, with the same headquarters, succeeding **Charlton Messick,** whose death on July 2 was reported in the *Railway Age* of July 14. **Sterling Baker,** auditor of disbursements, has been advanced to auditor, replacing Mr. Bourscheidt, and **Vern L. Gish** has been appointed auditor of disbursements, relieving Mr. Baker.

OPERATING

W. S. Moore, acting superintendent of the Louisville division of the Louisville & Nashville, has been promoted to superintendent of that division, with headquarters as before at Louisville, Ky.

C. E. Sanschagrin has been appointed assistant superintendent, Montreal Terminals of the Canadian National at Montreal, Que., where he succeeds **R. M. MacDonald,** transferred.

Charles I. Morton, assistant superintendent of the Seaboard Air Line's North Florida division at Jacksonville, Fla., has been appointed superintendent station operations with the same headquarters. The positions of superintendent stations and

Charles I. Morton

transfers and supervisor of claim prevention have been abolished. **M. B. Craig** has been named assistant superintendent, North Florida division, at Jacksonville, succeeding Mr. Morton, and **J. A. Shea,** supervisor claim prevention there, has been named assistant superintendent station operations with the same headquarters.

Mr. Morton was born at Wilmington,

News Department continued on next left-hand page

DURING much of the war period, the Southern Pacific's "Coast Daylight," running on the Coast Line between San Francisco and Los Angeles, has been operating with twenty-two cars. This has made it possible to handle a tremendous volume of essential travel, including that of large numbers of soldiers.

The "Coast Daylight" is powered by Lima 4-8-4s, of which the Southern Pacific Lines now operate a fleet of sixty.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

N. C., and entered railroading in 1915, joining the Seaboard as a clerk at Wilmington in 1920. He subsequently advanced through numerous operating assignments until his appointment as assistant superintendent of the North Florida division, the post he held at the time of his recent promotion to superintendent station operations. His new position includes system-wide jurisdiction over agency operations on the Seaboard.

David A. Ruhl, engineer of buildings of the Chicago, Rock Island & Pacific at Chicago, has been promoted to superintendent in charge of maintenance and operation of the LaSalle Street station, a newly-created position. **T. J. Engle,** assistant engineer of buildings, has been advanced to engineer of buildings, succeeding Mr. Ruhl.

Mr. Ruhl was born at Des Moines, Iowa, on March 4, 1896, and was graduated from Cornell University, Ithaca, N. Y. He entered the service of the Rock Island on July 1, 1924, as a rodman in the engineering

David A. Ruhl

department at Des Moines, and on March 23, 1925, he was promoted to instrumentman at Chicago, several months later being promoted to senior instrumentman. On April 15, 1926, he was advanced to assistant engineer, and on January 1, 1929, he was appointed acting division engineer at Chicago. Mr. Ruhl was re-appointed assistant engineer on January 1, 1931, and on February 1, 1932, he was appointed rodman. On March 1, 1932, he was appointed a track supervisor on the Illinois division, and on May 21, 1934, he returned to his former position as assistant engineer on the Chicago Terminal division. On October 1, 1935, he was appointed general foreman at the Chicago terminal, and on August 21, 1937, he was promoted to stationmaster of the LaSalle Street station. Mr. Ruhl was advanced to general building inspector, with headquarters at Chicago, in September, 1939, and in April, 1940, he was promoted to the position he held at the time of his new appointment.

Allen L. Kline, general manager of the New York, Susquehanna & Western with headquarters at Paterson, N. J., has resigned after 45 years of railroad service. In addition to his duties as chief engineer at Paterson, **F. C. Kronauer** has been appointed general manager in charge of operation and maintenance.

TRAFFIC

Walter R. Clinkinbeard has been appointed district freight and passenger agent of the Southern, with headquarters at Lexington, Ky.

J. C. Ellington, real estate agent of the Chicago, Milwaukee, St. Paul & Pacific at Chicago, has been appointed industrial commissioner, with the same headquarters, a change of title. The position of real estate agent has been abolished.

Guyton G. Howell has been appointed general agent of the Nashville, Chattanooga & St. Louis at Miami, Fla. **Collin F. Baker,** commercial agent at Tampa, Fla., has been named general agent there. **R. E. Herrington,** assistant Florida agent at Jacksonville, has been appointed assistant Florida general agent with the same headquarters. **R. B. Elliott,** freight traffic agent at Miami, Fla., has been transferred to Tampa succeeding **W. T. Haskins,** resigned.

MECHANICAL

Blair L. Thompson, mechanical inspector of the Canadian National at Montreal, Que., has been appointed night superintendent, Point St. Charles motive power shop at Montreal, succeeding **George Thomas Boone,** who has retired after nearly 37 years' service.

G. R. Andersen, assistant superintendent of the car department of the Chicago & North Western at Chicago, has been promoted to superintendent of the car department, succeeding **L. R. Wink,** who has been assigned to other duties. **C. P. Nelson,** assistant superintendent of car shops, has been advanced to assistant superintendent of the car department, replacing Mr. Andersen, with headquarters as before at Chicago.

ENGINEERING & SIGNALING

R. C. Young, acting division engineer of the Louisville division of the Louisville & Nashville, has been promoted to division engineer, with headquarters as before at Louisville, Ky.

J. S. Knight, principal assistant engineer of the Baltimore & Ohio Chicago Terminal at Chicago, has been promoted to assistant regional engineer, with the same headquarters.

O. A. C. Thorsen, assistant to the chief engineer of the New York, Susquehanna & Western at Paterson, N. J., has been promoted to assistant chief engineer with the same headquarters.

A. C. Clark, chief engineer of the Baltimore & Ohio at Baltimore, Md., and **C. B. Harveson,** chief engineer maintenance at Baltimore, have been named to the same positions on the Baltimore & Ohio Chicago Terminal RR., at Baltimore.

William J. Turner, principal assistant engineer of the Atlantic Coast Line, with headquarters at Wilmington, N. C., has been appointed engineer maintenance of way of the Southern division at Jacksonville, Fla., succeeding **D. M. Landlin,** who has been named assistant to the chief engineer at Wilmington. A photograph and a biographical sketch of Mr. Turner's railway career appeared on page 608 of the October 14, 1944, issue of *Railway Age.*

L. E. Kearney, who has been employed by the Federal Communications Commission for the past several years as inspector in charge at Philadelphia, Pa., and as chief of the emergency section, engineering department, at Washington, D. C., has been appointed communications engineer of the Association of American Railroads, communications section, with headquarters at New York, succeeding **J. L. Niesse,** who has returned to his former position as assistant superintendent, telephone and telegraph, of the New York Central at New York, on the expiration of his leave of absence from that road.

SPECIAL

Hector L. Lapointe, special representative in the department of research and development of the Canadian National, has been appointed assistant transport economist in that department, with headquarters at Toronto, Ont., for the provinces of Ontario and Quebec; and **Graeme C. Norman,** special representative in the same department, has been named assistant transport economist at Winnipeg, Man., for the provinces of Manitoba, Saskatchewan, Alberta and British Columbia. Mr. Lapointe and Mr. Norman will study the effect on the railways of highway and airway competition.

Mr. Lapointe was born at Ottawa, Ont., in 1898, and entered railroading in 1921 as chief clerk to the general agent at North Bay, Ont. He was appointed special representative in the department of research and development in January of this year, the post he was holding at the time of his appointment as assistant transport economist.

Mr. Norman was born at Toronto in 1898 and entered railroading in the Canadian National's express department in 1912, while a student at Manitoba University. He was chief clerk to the freight traffic manager prior to last January when he joined the department of research and development as special representative.

OBITUARY

William Stapp, who retired in 1940 as master mechanic of the Western Pacific, with headquarters at Elko, Nev., died in that city recently.

William W. Bates, who retired in 1942 as assistant to the general manager of the Delaware & Hudson at Albany, N. Y., died at Menands, a suburb of Albany, on July 7. He was 76 years old.

John W. Hanley, who retired in 1932 as general freight and passenger agent of the Central Vermont at St. Albans, Vt., died there on July 9. He was 82 years of age.

H. H. Garrigues, who retired earlier in the year as assistant to the general manager of the Pennsylvania's Eastern region at Philadelphia, Pa., died at Radnor, Pa., on July 15. He was 63 years of age.

Table of Unit Fuel and Power Consumption begins on next left-hand page

Availability IS HIGHER

with Security Circulators

To help maintain the high standard of performance of Northern Pacific's big 4-6-6-4s, each of them is equipped with eight Security Circulators.

Compared with other locomotives, those with Security Circulators are available for continuous operation for longer periods because they have cleaner flues, longer arch life, and improved combustion, so that boiler maintenance is substantially reduced.

These advantages are in addition to an improved circulation of water over the crown sheet and in side water-legs.

AMERICAN ARCH COMPANY, INC.

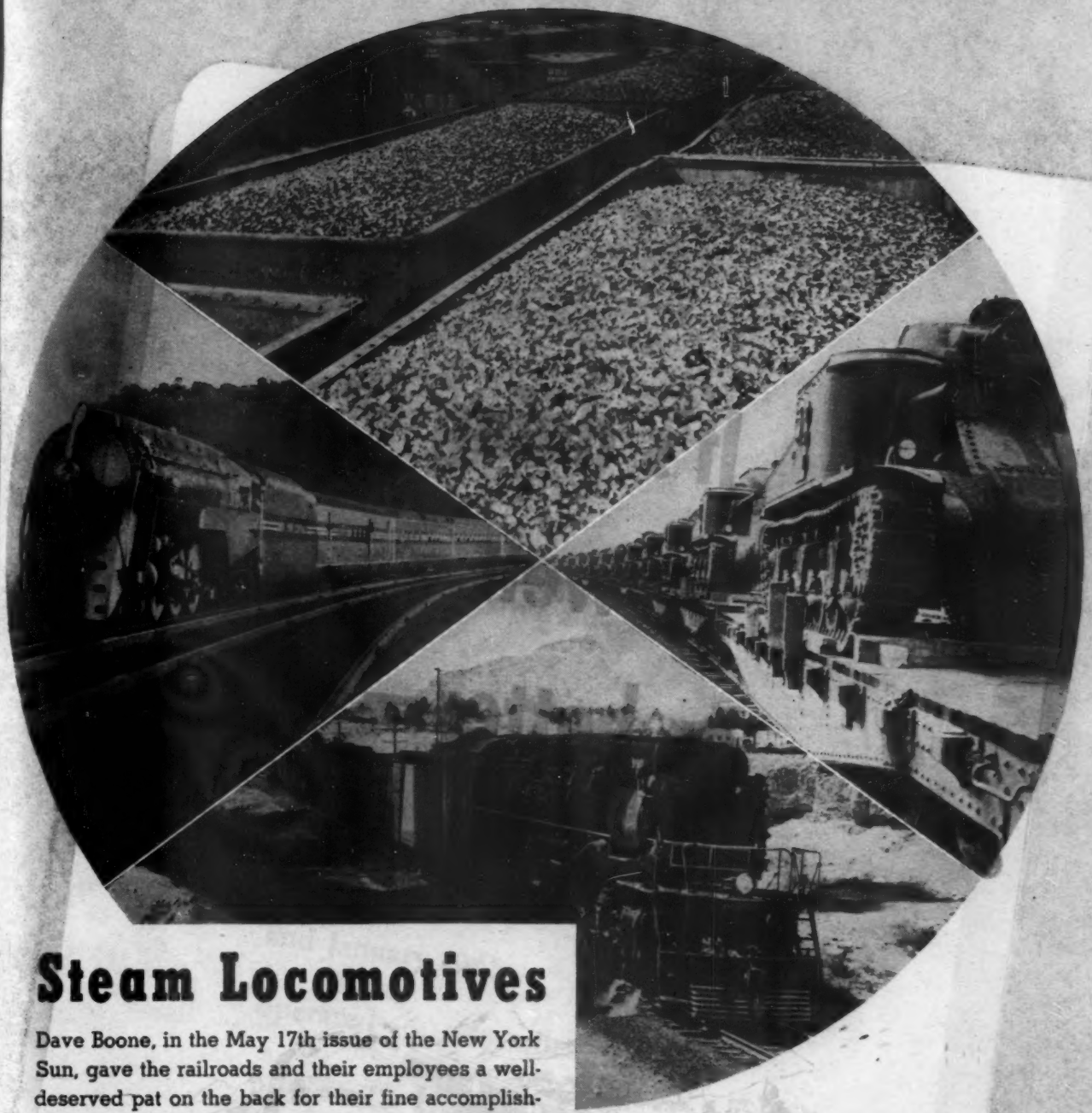
NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

Unit Fuel and Power Consumption of Locomotives and Rail Motor Cars—Railways of Class I in the United States (Excluding Switching and Terminal Companies) Calendar Years 1944 and 1943

Road		Fuel and power consumed per yard-switching locomotive-hour						Fuel and power consumed per 1,000 gross ton-miles (includ. locos. and tenders)—road freight service				Fuel and power consumed per passenger-train car-mile—road passenger service							
		Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Gals. of gasoline (gasoline and gas electric locos.)	Gals. of Diesel fuel (Diesel locos.)	Equated lb. of fuel (all locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Equated lb. of fuel (all road frt. locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Gals. of Diesel fuel (Diesel locos.)	Kw.-hrs. (electric locos.)	Kw.-hrs. (motor-car trains)	Gals. of gasoline (motor-car trains)	Gals. of Diesel fuel (motor-car trains)	Equated lb. of fuel (all road-pass. service)
SUMMARY:																			
Eastern District	1944	789	48.16	108	8.7	5.49	691	121	. . .	24.48	118	16.9	..	.26	3.4	6.0	.65	.34	14.6
	1943	769	44.43	112	8.7	5.34	684	118	....	24.43	115	16.9	..	.27	3.5	6.0	.64	.31	14.6
Pocahontas Region	1944	946	....	....	..	4.16	939	84	....	51.37	87	16.2	..	.30	38.0	..	.47	..	16.0
	1943	915	....	....	..	4.91	912	85	....	50.63	86	16.1	..	.29	28.8	..	.48	..	15.8
Southern Region	1944	844	71.41	....	..	6.97	773	130	7.34	....	127	16.2	.89	.28	..	6.2	.44	.24	15.5
	1943	831	72.12	....	..	7.14	773	125	7.03	....	123	16.5	.89	.29	..	6.2	.44	.25	15.4
Western District	1944	860	58.63	85	7.7	5.83	712	119	8.15	31.36	112	17.5	.94	.25	3.8	4.3	.46	.19	14.7
	1943	858	58.18	99	8.0	5.84	729	118	8.32	32.05	113	18.4	.96	.26	3.9	5.6	.47	.20	15.2
UNITED STATES	1944	821	58.85	109	8.4	5.81	717	119	8.15	28.89	115	16.9	.94	.27	3.5	6.0	.49	.23	14.8
	1943	805	58.39	114	8.6	5.78	718	117	8.31	28.97	114	17.2	.96	.27	3.5	6.0	.49	.24	15.0
NEW ENGLAND REGION:																			
Bangor & Aroostook	1944	759	....	....	..	....	759	125	....	....	125	10.6	..	..	..	..	..	..	10.6
	1943	789	....	....	..	....	789	124	....	....	124	11.4	..	..	..	..	..	..	11.4
Boston & Albany	1944	576	....	....	..	6.30	568	194	....	....	194	23.8	..	..	..	..	..	..	23.8
	1943	518	....	....	..	6.59	519	178	....	....	178	22.8	..	..	..	..	..	..	22.8
Boston & Maine	1944	700	....	....	..	4.83	678	101	....	208.89	101	15.9	..	..	..	..	.50	.18	16.0
	1943	701	....	....	..	4.29	469	99	....	198.23	100	15.2	..	..	..	..	.48	.17	15.1
Canadian National Lines in New England	1944	898	....	....	..	....	899	121	....	....	121	31.7	..	..	..	..	..	..	31.7
	1943	1,233	....	....	..	....	1,234	112	....	....	112	33.4	..	..	..	..	..	..	33.4
Canadian Pacific (Lines in Maine)	1944	658	....	....	..	....	658	103	....	....	103	10.4	..	..	..	..	..	..	10.4
	1943	685	....	....	..	....	687	97	....	....	97	10.4	..	..	..	..	..	..	10.4
Canadian Pacific (Lines in Vermont)	1944	615	....	....	..	....	615	122	....	....	122	16.1	..	..	..	..	..	..	16.1
	1943	634	....	....	..	....	634	121	....	....	121	15.7	..	..	..	..	..	..	15.7
Central Vermont	1944	904	....	....	..	5.19	620	118	....	....	118	18.9	..	.16	..	..	.28	..	18.5
	1943	911	....	....	..	5.60	681	117	....	....	117	16.8	..	..	..	..	.29	..	16.4
Maine Central	1944	593	....	....	..	5.51	582	106	....	....	106	13.2	..	..	..	..	..	.29	13.3
	1943	591	....	....	..	5.78	439	106	....	....	106	13.3	..	..	..	..	..	.28	13.2
New York Connecting	1944	....	....	....	..	....	....	....	....	32.02	48	....	..	..	3.3	..	..	..	4.9
	1943	....	....	....	..	....	....	....	....	30.84	46	....	..	..	3.4	..	..	..	5.0
New York, New Haven & Hartford	1944	860	....	80	..	5.86	408	120	....	25.76	101	18.4	..	.26	4.1	5.1	.75	.29	12.0
	1943	772	....	82	..	5.37	444	118	....	24.88	101	17.2	..	.28	4.1	5.1	.79	.21	11.9
Rutland	1944	683	....	....	..	....	683	139	....	....	139	15.4	..	..	..	..	..	..	15.4
	1943	654	....	....	..	....	654	129	....	....	129	15.5	..	..	..	..	..	..	15.5
TOTAL NEW ENGLAND REGION	1944	717	....	101	..	5.60	532	122	....	28.69	113	17.8	..	.26	4.1	5.1	.53	.22	14.7
	1943	693	....	101	..	5.30	486	117	....	28.43	110	16.9	..	.28	4.1	5.1	.55	.20	14.3
GREAT LAKES REGION:																			
Ann Arbor	1944	497	....	....	..	4.39	300	98	....	....	98	24.5	..	..	..	..	..	..	24.5
	1943	480	....	....	..	3.26	378	94	....	....	94	25.5	..	..	..	..	..	..	25.5
Cambria & Indiana	1944	....	....	....	..	....	....	260	....	....	260	....	..	..	..	..	..	..	....
	1943	....	....	....	..	....	....	287	....	....	287	....	..	..	..	..	..	..	....
Delaware & Hudson	1944	691	....	....	..	10.70	687	106	....	....	106	13.7	..	..	..	..	..	..	13.7
	1943	678	....	....	..	..	678	106	....	....	106	14.8	..	..	..	..	..	..	14.8
Delaware, Lackawanna & Western	1944	983	....	....	..	5.59	816	122	....	....	122	19.9	..	..	..	5.4	..	..	19.3
	1943	1,009	....	....	..	5.35	825	124	....	....	124	20.0	..	..	..	5.4	..	..	19.3
Detroit & Mackinac	1944	548	....	....	..	....	548	98	....	....	99	17.9	..	..	..	..	.52	..	16.8
	1943	529	....	....	..	....	531	125	....	....	124	15.3	..	..	..	..	.50	..	14.6
Detroit & Toledo Shore Line	1944	672	....	....	..	....	672	84	....	....	84	....	..	..	..	..	..	..	....
	1943	723	....	....	..	....	723	81	....	....	81	....	..	..	..	..	..	..	....
Erie	1944	733	....	....	8.9	7.01	737	95	....	....	95	18.0	..	..	..	..	.95	..	18.3
	1943	714	....	....	8.9	6.33	713	95	....	....	95	18.5	..	..	..	..	.94	.48	18.7
Grand Trunk Western	1944	804	....	....	..	5.86	604	86	....	....	86	14.0	..	..	..	..	..	.14	13.9
	1943	840	....	....	..	5.95	662	88	....	....	88	14.4	..	..	..	..	..	.14	14.4
Lehigh & Hudson River	1944	900	....	....	..	....	900	101	....	....	101	....	..	..	..	..	..	..	....
	1943	900	....	....	..	....	900	111	....	....	111	....	..	..	..	..	..	..	....
Lehigh & New England	1944	656	....	....	..	....	656	162	....	....	162	....	..	..	..	..	..	..	....
	1943	675	....	....	..	....	675	163	....	....	163	....	..	..	..	..	..	..	....
Lehigh Valley	1944	845	....	54	9.6	5.45	539	110	....	....	110	16.1	..	.63	6.4	..	.79	..	15.8
	1943	822	....	57	9.1	5.25	594	109	....	....	109	16.5	..	.85	6.4	..	.71	..	16.1

Table continued on second left-hand page



Steam Locomotives

Dave Boone, in the May 17th issue of the New York Sun, gave the railroads and their employees a well-deserved pat on the back for their fine accomplishments under the present conditions of war traffic. Aided and abetted by the personnel, the steam locomotive has played a most important role in this achievement. The public cannot be expected to know this fact and it is doubtful if all railroad men realize it.

Steam locomotives, under adverse conditions, have continued to "keep 'em rolling." With the ability to carry on under such adverse circumstances, it is not hard to visualize the potentialities of steam locomotives born to modern design.

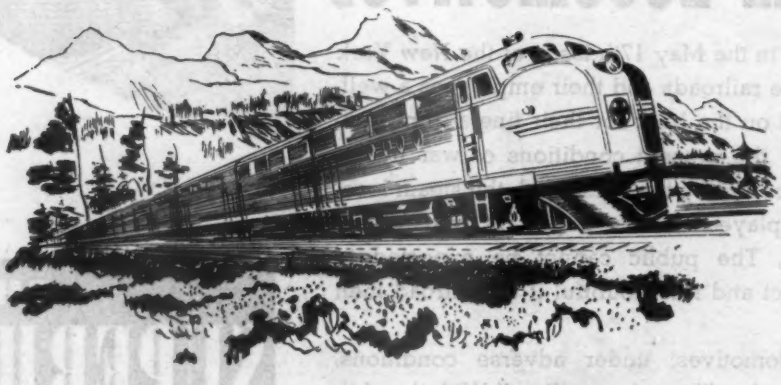
The steam locomotives of tomorrow will be hard to beat as a dependable means of motive power for this country's rail transportation.

THE
SUPERHEATER
COMPANY
Representative of AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Ave., CHICAGO
ALCO
Montreal, Canada, THE SUPERHEATER COMPANY, LTD.

Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • American Throttles

IT'S A GREAT NEW DAY FOR RAILROADING

It's doing as well— or better— right now!



GENERAL MOTORS
LOCOMOTIVES

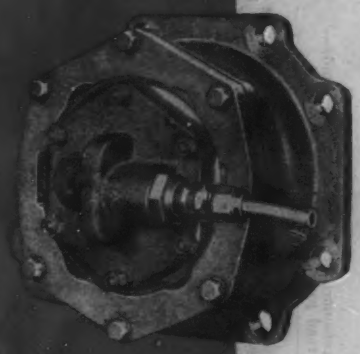
The Santa Fe operating
between Winslow, Ariz.
and San Bernardino, Cal.
goes through some mighty
mountainous terrain—
YET
A General Motors Diesel
freight locomotive
between April 1941,
and January 1945
operated 460,485 miles
with 85.7% average availability.
Average miles per month—
10,233.

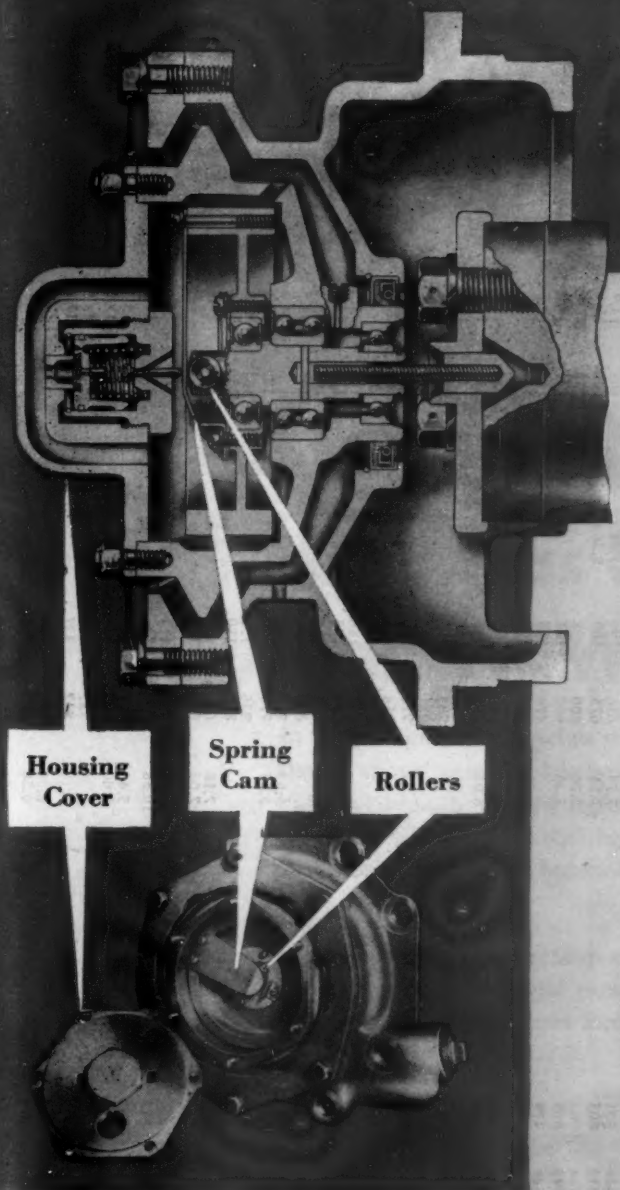
ELECTRO-MOTIVE DIVISION
GENERAL MOTORS CORPORATION • LA GRANGE, ILL.

Unit Fuel and Power Consumption of Locomotives and Rail Motor Cars—Railways of Class I in the United States (Excluding Switching and Terminal Companies) Calendar Years 1944 and 1943

Road		Fuel and power consumed per yard-switching locomotive-hour						Fuel and power consumed per 1,000 gross ton-miles (includ. locos. and tenders)—road freight service				Fuel and power consumed per passenger-train car-mile—road passenger service							
		Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Gals. of gasoline (gasoline and gas electric locos.)	Gals. of Diesel fuel (Diesel locos.)	Equated lb. of fuel (all locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Equated lb. of fuel (all road frt. locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Gals. of Diesel fuel (Diesel locos.)	Kw.-hrs. (electric locos.)	Kw.-hrs. (motor-car trains)	Gals. of gasoline (motor-car trains)	Gals. of Diesel fuel (motor-car trains)	Equated lb. of fuel (all road-pass. service)
Monongahela	1944	886	....	...	..	...	886	88	....	.....	89	51.0	..	..	..	..	..	..	51.0
	1943	868	....	...	..	...	868	89	....	.....	89	50.4	..	..	..	..	..	..	50.4
Montour	1944	1,299	....	...	..	...	1,299	328	....	.....	328	...	..	..	..	..	..	..	...
	1943	1,318	....	...	..	...	1,318	344	....	.....	344	...	..	..	..	..	..	..	...
New York Central	1944	762	....	106	..	5.11	667	105	....	47.41	104	14.8	..	..	3.6	4.8	.51	..	14.3
	1943	720	....	112	..	5.09	649	100	....	48.15	100	14.8	..	..	3.6	4.8	.54	..	14.3
New York, Chicago & St. Louis	1944	735	....	...	..	5.58	716	88	....	.....	88	16.2	..	..	10.5	..	..	..	16.2
	1943	716	....	...	..	5.67	700	87	....	.....	87	18.0	..	..	11.0	..	..	..	18.0
New York, Ontario & Western	1944	606	....	...	..	4.01	453	194	....	.....	194	15.3	..	..	..	..	..	..	15.3
	1943	533	....	...	..	4.15	400	189	....	.....	189	13.3	..	..	..	..	..	..	13.3
New York, Susquehanna & Western	1944	780	....	...	..	7.59	297	229	....	.....	153	39.9	..	.22	..	..	1.18	.57	21.9
	1943	791	....	...	..	7.02	336	220	....	.....	150	39.8	..	.16	..	..	1.34	.48	27.4
Pere Marquette	1944	744	....	...	..	6.95	764	91	....	.....	91	15.3	..	.17	..	..	..	..	15.0
	1943	711	....	...	..	6.49	729	90	....	.....	90	14.9	..	.16	..	..	..	..	14.5
Pittsburgh & Lake Erie	1944	663	....	...	..	...	663	93	....	.....	93	28.5	..	..	..	..	..	..	28.5
	1943	685	....	...	..	...	685	88	....	.....	88	28.8	..	..	..	..	..	..	28.8
Pittsburg & Shawmut	1944	...	....	...	..	...	...	234	....	.....	234	...	..	..	..	..	..	..	...
	1943	...	....	...	..	...	...	230	....	.....	230	...	..	..	..	..	..	..	...
Pittsburgh & West Virginia	1944	1,168	....	...	..	7.38	1,227	176	....	.....	176	...	..	..	..	..	..	..	...
	1943	1,214	....	...	..	7.46	1,225	177	....	.....	177	...	..	..	..	..	..	..	...
Pittsburg, Shawmut & Northern	1944	1,240	....	...	..	...	1,240	281	....	.....	281	...	..	..	..	..	..	..	...
	1943	1,196	....	...	..	...	1,196	271	....	.....	271	...	..	..	..	..	..	..	...
Wabash	1944	778	....	...	..	5.97	587	107	....	.....	107	15.4	..	.38	..	..	.29	..	15.3
	1943	769	....	...	..	5.99	632	106	....	.....	107	15.8	..	...	..	..	.26	..	15.8
TOTAL GREAT LAKES REGION	1944	763	....	108	9.6	5.49	671	104	....	47.50	104	15.6	..	.29	3.7	5.1	.75	.51	15.1
	1943	741	....	114	9.1	5.40	669	102	....	48.20	102	15.6	..	.16	3.7	5.1	.74	.44	15.2
CENTRAL EASTERN REGION:																			
Akron, Canton & Youngstown	1944	681	....	...	..	4.49	552	120	....	.....	120	...	..	..	..	..	..	..	...
	1943	698	....	...	..	4.96	583	120	....	.....	120	...	..	..	..	..	..	..	...
Baltimore & Ohio	1944	680	48.16	34	..	5.82	692	140	....	265.08	147	21.5	..	.27	7.7	..	.40	.27	19.5
	1943	677	44.43	31	..	4.79	674	146	....	265.85	145	22.7	..	.27	8.2	..	.36	..	20.1
Bessemer & Lake Erie	1944	632	....	...	..	5.86	636	100	....	.....	100	24.5	..	..	..	..	..	..	24.5
	1943	632	....	...	..	5.46	635	95	....	.....	95	24.7	..	..	..	..	..	..	24.7
Central of New Jersey	1944	560	....	...	..	4.77	396	133	....	.....	133	25.0	..	.20	..	..	..	..	25.0
	1943	549	....	...	..	4.94	424	140	....	.....	140	23.2	..	.27	..	..	..	..	23.2
Chicago & Eastern Illinois	1944	1,143	....	...	..	4.81	912	115	....	.....	115	18.9	..	..	..	..	..	..	18.9
	1943	1,117	....	...	..	4.87	875	118	....	.....	118	19.1	..	..	..	..	.39	..	19.1
Chicago & Illinois Midland	1944	978	....	...	..	..	981	170	....	.....	170	33.5	..	..	..	..	..	..	33.6
	1943	1,102	....	...	..	..	1,105	164	....	.....	164	25.2	..	..	..	..	..	..	25.3
Chicago, Indianapolis & Louisville	1944	1,086	....	...	..	7.53	697	126	....	.....	126	19.5	..	..	..	..	..	..	19.5
	1943	1,105	....	...	..	8.01	694	127	....	.....	127	20.6	..	..	..	..	..	..	20.6
Detroit, Toledo & Ironton	1944	858	....	...	..	6.36	857	116	....	.....	117	...	..	..	..	..	..	..	...
	1943	749	....	...	..	5.99	758	101	....	.....	102	...	..	..	..	..	..	..	...
Elgin, Joliet & Eastern	1944	956	....	...	..	5.76	426	137	....	.....	137	...	..	..	..	..	..	..	...
	1943	917	....	...	..	5.79	464	135	....	.....	134	...	..	..	..	..	..	..	...
Illinois Terminal Co.	1944	1,115	....	75	..	..	684	92	....	25.70	46	...	..	..	2.3	2.9	.23	..	3.6
	1943	1,132	....	74	..	...	674	88	....	26.50	47	...	..	..	2.2	2.9	.23	..	3.6
Long Island	1944	787	....	79	..	6.99	591	322	....	107.18	306	19.1	..	..	6.9	5.6	..	..	11.0
	1943	775	....	84	..	7.41	577	321	....	104.90	306	18.7	..	..	7.0	5.5	..	..	10.9
Missouri Illinois	1944	...	....	...	..	...	...	265	....	.....	265	25.1	..	..	..	..	.34	..	9.2
	1943	...	....	...	..	...	...	282	....	.....	282	21.7	..	..	..	..	.33	..	8.6
Pennsylvania System	1944	868	....	103	7.2	4.93	827	137	....	22.67	125	16.7	..	..	3.3	8.0	..	.32	12.5
	1943	854	....	106	7.8	4.37	816	135	....	22.53	122	17.1	..	..	3.3	8.1	.67	.36	12.7
Pennsylvania-Reading Seashore Lines	1944	604	....	...	..	...	604	229	....	.....	229	17.7	..	..	..	7.8	.89	.54	17.0
	1943	570	....	...	..	...	570	219	....	.....	219	17.3	..	..	..	7.7	.94	..	16.7
Reading Company	1944	684	....	235	..	5.00	463	125	....	.....	125	19.9	..	.54	..	8.2	.80	.33	18.2
	1943	657	....	254	..	5.02	489	123	....	.....	123	19.7	..	.45	..	8.6	.74	.31	18.1
Staten Island Rapid Transit	1944	980	....	...	..	...	980	301	....	.....	480	39.4	..	..	..	6.5	..	..	10.6
	1943	...	....	...	..	...	977	684	....	.....	684	91.9	..	..	..	6.3	..	..	10.6

A Look through the *Middle* of the "AP" Decelostat





THE "AP" Decelostat truly rolls with the wheel and registers change in wheel retardation when brakes are applied. If the wheel slips, the high rate of retardation motivates the Decelostat to moderate the braking force and forestall slide.

Sensitivity is obtained with mechanical simplicity. The Decelostat shaft rolls on ball bearings, front and rear; its actuating medium is a simple spring cam. Mechanical design requires few parts—assures the operating reliability that instantly identifies wheel slip and *softens* the brake.

SOFTENS THE BRAKE
WHEN WHEEL SLIP IMPENDS

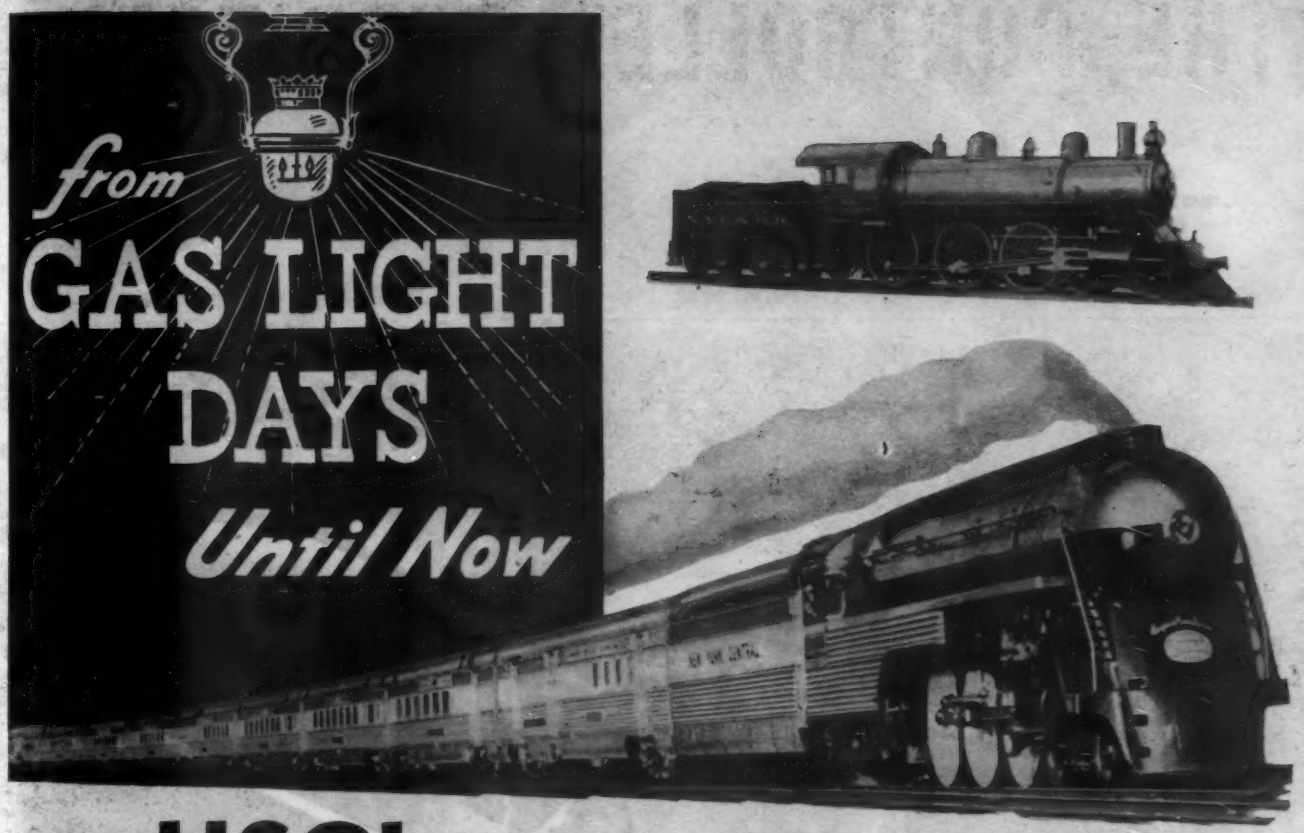
Westinghouse Air Brake Company

Wilmerding, Pa.

Unit Fuel and Power Consumption of Locomotives and Rail Motor Cars—Railways of Class I in the United States (Excluding Switching and Terminal Companies) Calendar Years 1944 and 1943

Road		Fuel and power consumed per yard-switching locomotive-hour						Fuel and power consumed per 1,000 gross ton-miles (includ. locos. and tenders)—road freight service				Fuel and power consumed per passenger-train car-mile—road passenger service							
		Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Gals. of gasoline (gasoline and gas electric locos.)	Gals. of Diesel fuel (Diesel locos.)	Equated lb. of fuel (all locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Equated lb. of fuel (all road frt. locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Gals. of Diesel fuel (Diesel locos.)	Kw.-hrs. (electric locos.)	Kw.-hrs. (motor-car trains)	Gals. of gasoline (motor-car trains)	Gals. of Diesel fuel (motor-car trains)	Equated lb. of fuel (all road-pass. service)
Western Maryland	1944	1,247	....	....	....	6.02	976	158	....	....	159	32.5	..	..	..	..	..	..	32.5
	1943	1,079	....	....	..	5.39	981	160	....	....	160	28.5	..	..	..	..	..	..	28.5
Wheeling & Lake Erie	1944	895	....	....	..	7.26	819	119	....	....	119	....	..	..	..	..	..	..	....
	1943	887	....	....	..	7.31	815	121	....	....	121	....	..	..	..	..	..	..	....
TOTAL CENTRAL EASTERN REGION	1944	813	48.16	109	7.2	5.46	727	139	....	23.22	132	18.2	..	.27	3.3	6.3	.52	.32	14.1
	1943	798	44.43	113	7.8	5.29	721	136	....	23.15	130	18.5	..	.27	3.4	6.4	.51	.36	14.3
POCAHONTAS REGION:																			
Chesapeake & Ohio	1944	881	....	....	..	...	881	79	....	....	79	15.4	..	..	..	..	.43	..	15.4
	1943	847	....	....	..	...	847	77	....	....	77	15.2	..	..	..	..	.43	..	15.2
Norfolk & Western	1944	1,014	....	....	..	...	1,014	85	....	82.41	90	17.5	..	..	38.0	..	..	..	17.7
	1943	1,003	....	....	..	...	1,003	88	....	79.23	92	17.6	..	..	28.8	..	..	..	17.8
Richmond, Fredericksburg & Potomac	1944	805	....	....	..	4.16	751	102	....	43.64	101	15.1	..	.30	..	..	.87	..	14.4
	1943	787	....	....	..	4.91	773	107	....	45.13	106	15.3	..	.29	..	..	.73	..	13.7
Virginian	1944	1,508	....	....	..	...	1,508	121	....	39.56	114	29.7	..	..	..	..	..	..	29.7
	1943	1,411	....	....	..	...	1,411	121	....	39.67	109	28.2	..	..	..	..	..	..	28.2
TOTAL POCAHONTAS REGION	1944	946	....	....	..	4.16	939	84	....	51.37	87	16.2	..	.30	38.0	..	.47	..	16.0
	1943	915	....	....	..	4.91	912	85	....	50.63	86	16.1	..	.29	28.8	..	.48	..	15.8
SOUTHERN REGION:																			
Alabama Great Southern	1944	693	....	....	..	6.09	687	134	....	....	123	13.9	..	.30	..	..	..	..	13.8
	1943	722	....	....	..	6.09	714	127	....	....	115	13.6	..	.30	..	..	..	..	13.5
Atlanta & West Point (inc. Western of Alabama)	1944	863	....	....	..	7.51	871	166	....	....	166	14.7	..	..	..	..	..	..	14.7
	1943	850	....	....	..	...	850	157	....	....	157	13.9	..	..	..	..	..	..	13.9
Atlanta, Birmingham & Coast	1944	847	....	....	..	...	847	145	....	....	145	19.9	..	..	..	..	..	..	19.9
	1943	787	....	....	..	...	787	143	....	....	143	18.5	..	..	..	..	..	..	18.5
Atlantic Coast Line	1944	821	....	....	..	7.79	656	120	21.74	....	107	14.9	2.07	.30	..	..	..	..	13.1
	1943	803	....	....	..	7.51	675	109	8.36	....	108	15.4	1.76	.31	..	..	..	..	13.5
Central of Georgia	1944	963	....	....	..	7.20	600	128	....	....	128	16.0	1.29	.23	..	..	..	..	15.9
	1943	869	....	....	..	7.26	603	121	....	....	121	16.0	..	.21	..	..	..	..	15.8
Charleston & Western Carolina	1944	479	....	....	..	...	479	144	....	....	144	15.7	..	..	..	..	..	..	15.7
	1943	478	....	....	..	...	478	139	....	....	139	17.7	..	..	..	..	..	..	17.7
Cincinnati, New Orleans & Texas Pacific	1944	808	....	....	..	5.91	699	155	....	....	118	15.4	..	..	..	..	..	..	15.4
	1943	980	....	....	..	6.04	789	115	....	....	111	13.5	..	..	..	..	..	..	13.5
Clinchfield	1944	950	....	....	..	...	950	136	....	....	136	19.4	..	..	..	..	..	..	19.4
	1943	984	....	....	..	...	984	137	....	....	137	19.1	..	..	..	..	..	..	19.1
Columbus & Greenville	1944	931	....	....	..	...	931	155	....	....	155	21.7	..	..	..	..	.37	..	18.4
	1943	916	....	....	..	...	916	164	....	....	164	19.5	..	..	..	..	.37	..	17.7
Florida East Coast	1944	..	71.92	....	..	...	856	...	7.32	....	87	....	.88	.29	..	..	..	..	8.5
	1943	..	72.66	....	..	...	865	...	6.96	....	83	....	.89	.28	..	..	..	..	8.4
Georgia	1944	736	....	....	..	...	736	140	....	....	140	15.2	..	..	..	..	..	..	15.2
	1943	714	....	....	..	...	714	135	....	....	135	13.8	..	..	..	..	..	..	13.8
Georgia & Florida	1944	1,062	....	....	..	...	1,062	147	....	....	145	15.4	..	..	..	..	..	..	85.1
	1943	813	....	....	..	...	813	145	....	....	145	44.5	..	..	..	..	.03	..	35.0
Georgia, Southern & Florida	1944	1,038	....	....	..	5.63	788	135	....	....	135	14.8	..	..	..	..	..	..	14.8
	1943	975	....	....	..	5.55	770	129	....	....	129	14.3	..	..	..	..	..	..	14.3
Gulf & Ship Island	1944	936	....	....	..	...	936	151	....	....	151	14.8	..	..	..	..	..	..	14.8
	1943	873	....	....	..	...	873	150	....	....	150	14.4	..	..	..	..	..	..	14.4
Gulf, Mobile & Ohio	1944	922	....	....	..	7.18	632	114	....	....	114	10.6	..	.24	..	..	.49	.19	7.3
	1943	928	....	....	..	7.02	695	115	....	....	116	8.8	..	.24	..	..	.49	.23	7.1
Illinois Central (including Yazoo & Mississippi Valley)	1944	882	....	....	..	9.52	795	117	....	....	117	16.2	..	.22	..	6.2	..	.17	14.3
	1943	873	....	....	..	10.58	791	113	....	....	113	16.7	..	.23	..	6.2	..	.17	14.7
Louisville & Nashville	1944	793	....	....	..	5.40	777	130	....	....	130	19.1	..	.27	..	..	.41	..	22.4
	1943	807	....	....	..	5.00	790	129	....	....	129	19.5	..	.28	..	..	.39	..	22.8
Mississippi Central	1944	987	....	....	..	...	987	142	....	....	142	14.7	..	..	..	..	..	..	14.7
	1943	842	....	....	..	...	842	127	....	....	127	17.8	..	..	..	..	..	..	17.8
Nashville, Chattanooga & St. Louis	1944	812	....	....	..	6.29	819	151	....	....	152	15.8	..	..	..	..	..	..	15.8
	1943	770	....	....	..	6.38	797	149	....	....	150	16.6	..	..	..	..	..	..	16.6
New Orleans & Northeastern	1944	1,034	....	....	..	4.80	845	129	....	....	126	13.3	..	.31	..	..	..	..	13.2
	1943	791	....	....	..	4.59	694	121	....	....	121	13.8	..	.30	..	..	..	..	13.6

* Table continued on second left-hand page



HSGI Has Served THE NEW YORK CENTRAL

In 1910 when many coaches were still lighted by gas, locomotives like the 4-6-0 shown above were the last word on the New York Central Railroad. Progress has since brought electric lighting and vastly improved locomotives, but HUNT-SPILLER GUN IRON still helps to maintain the power and efficiency of New York Central's modern locomotives, just as it did for the engines of 35 years ago.

A generation or more of steady loyalty to a product is a powerful recommendation, especially when 34 other important roads have used HSGI parts for a like period. This is more than ample proof that HUNT-SPILLER GUN IRON *does* resist wear better; *does* promote locomotive efficiency for longer periods.

HUNT SPILLER GUN IRON
HSGI
★AIR FURNACE PROCESS★

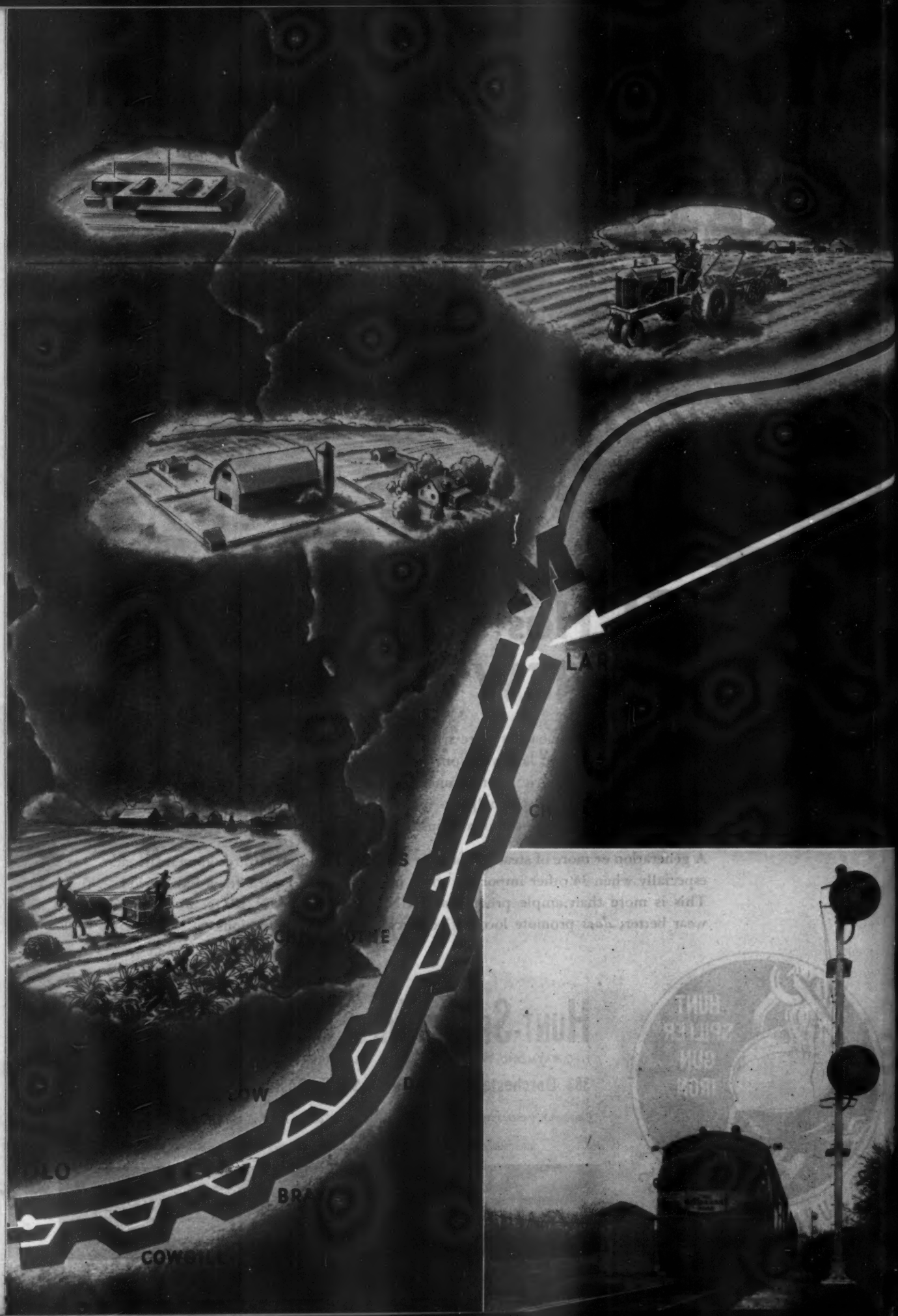
HUNT-SPILLER MFG. CORPORATION

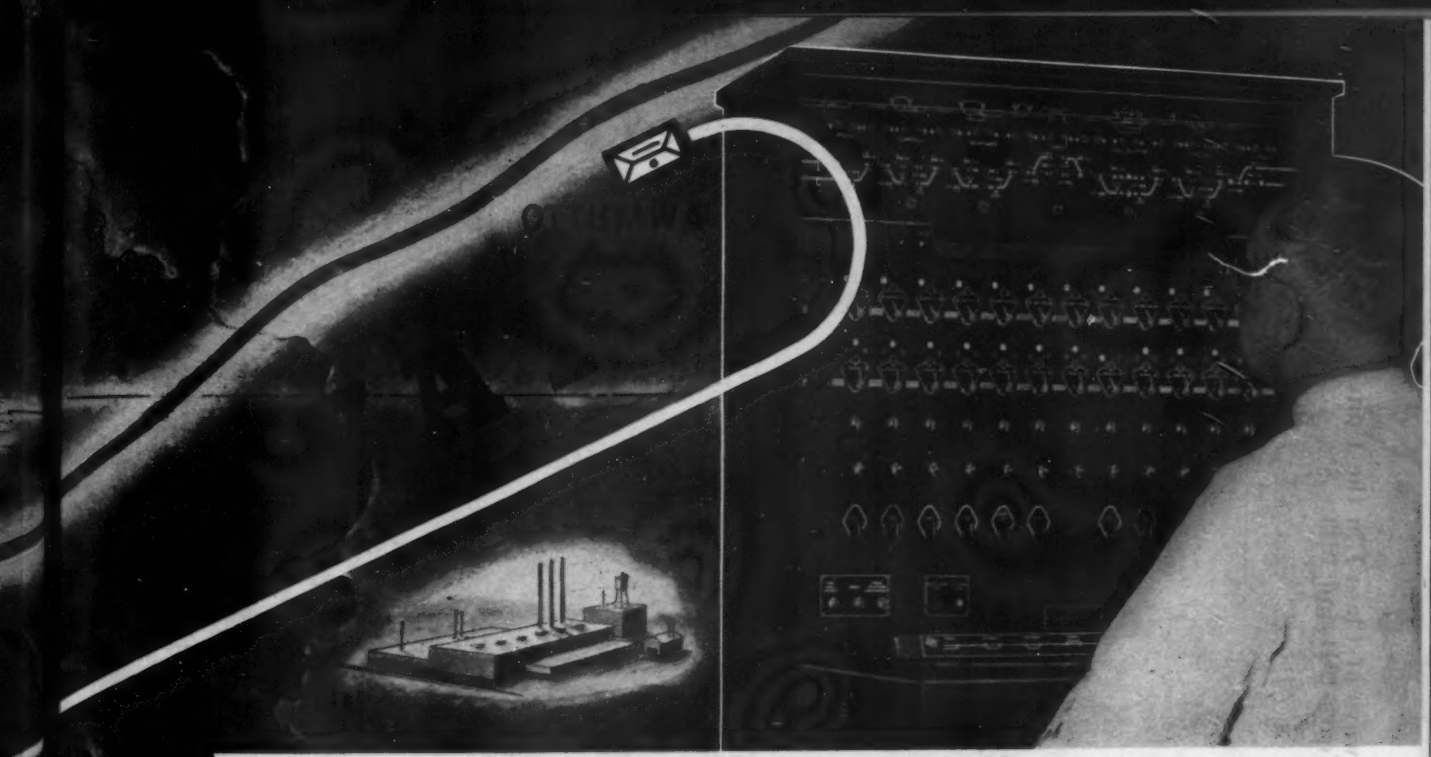
N. C. RAYMOND, *President* — E. J. FULLER, *Vice-Pres. & Gen. Mgr.*

383 Dorchester Ave. ★ South Boston 27, Mass.

Canadian Representatives: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.
Export Agents:
International Ry. Supply Co., 30 Church Street, New York 7, N. Y.

Cylinder Bushings	Crosshead Shoes	Dunbar Sectional Type Packing
Cylinder Packing Rings	Hub Liners	Duplex Sectional Type Packing for Cylinders and Valves
Pistons or Piston Bull Rings	Shoes and Wedges	(Duplex Springs for Above Sectional Packing)
Valve Bushings	Floating Rod Bushings	Cylinder Snap Rings
Valve Packing Rings	Light Weight Valves	Valve Rings, All Shapes
Valve Bull Rings	Cylinder Liners and Pistons for Diesel Service	





CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

Traffic conditions on the Chicago, Milwaukee, St. Paul and Pacific called for the installation of Centralized Traffic Control on 51 miles of single track between Laredo and Polo, Mo., connecting with an earlier C.T.C. installation between Polo and Birmingham.

It was desirable to keep this additional territory under the immediate supervision of the division office at Ottumwa, *102.2 miles from the beginning of the controlled territory*. Thanks to "Union" Coded Carrier Control, location of the C.T.C. machine in the dispatcher's office at Ottumwa was entirely feasible.

Telephone wires already in service for train dispatching are utilized. These wires are also connected simplex to handle a telegraph circuit from Chicago to Kansas City, and provision is made for a carrier telephone circuit between Ottumwa and Kansas City.

Coded Carrier Control, which makes possible both the distant location of C.T.C. machines and increased use of wires which carry other communication services, is found *only* in "Union" C.T.C. installations.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

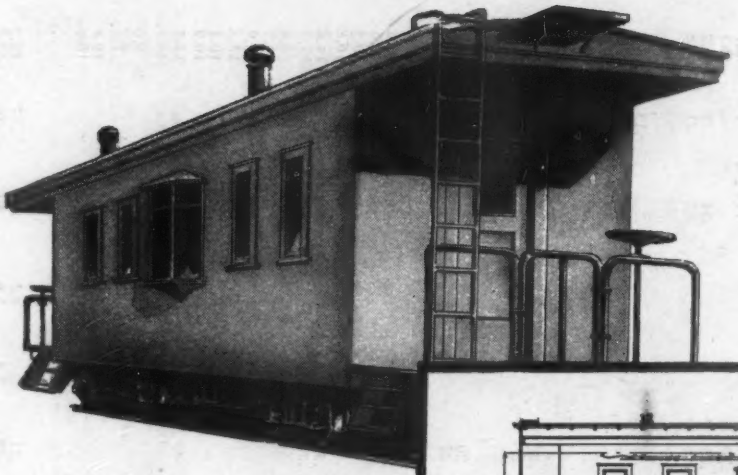
Unit Fuel and Power Consumption of Locomotives and Rail Motor Cars—Railways of Class I in the United States (Excluding Switching and Terminal Companies) Calendar Years 1944 and 1943

Road		Fuel and power consumed per yard-switching locomotive-hour						Fuel and power consumed per 1,000 gross ton-miles (includ. locos. and tenders)—road freight service				Fuel and power consumed per passenger-train car-mile—road passenger service							
		Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Gals. of gasoline (gasoline and gas electric locos.)	Gals. of Diesel fuel (Diesel locos.)	Equated lb. of fuel (all locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Equated lb. of fuel (all road frt. locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Gals. of Diesel fuel (Diesel locos.)	Kw.-hrs. (electric locos.)	Kw.-hrs. (motor-car trains)	Gals. of gasoline (motor-car trains)	Gals. of Diesel fuel (motor-car trains)	Equated lb. of fuel (all road-pass. service)
Norfolk Southern	1944	773	....	...	..	....	773	108	....	....	108	13.8	..	..	..	..	.35	..	12.3
	1943	788	....	...	..	....	788	99	....	....	99	13.9	..	..	..	..	.33	..	12.0
Seaboard Air Line	1944	550	43.57	...	..	6.53	549	137			130	15.2		.27	..	..	.43	.19	14.9
	1943	567	43.28	...	..	6.89	595	128	5.22	....	119	15.1	.64	.28	..	..	.44	.20	13.4
Southern	1944	1,012	....	...	..	6.73	964	149	....	....	147	16.8	..	.29	..	..	..	.34	15.9
	1943	962	....	...	..	6.55	925	145	....	....	144	17.1	..	.29	..	..	..	.34	16.1
Tennessee Central	1944	1,009	....	...	..	6.10	506	213	....	....	214	24.3	..	..	..	..	..	..	24.4
	1943	1,143	....	...	..	5.58	538	206	....	....	206	22.9	..	..	..	..	..	..	22.9
TOTAL SOUTHERN REGION	1944	844	71.41	..	..	6.97	773	130	7.34	....	127	16.2	.89	.28	..	6.2	.44	.24	15.5
	1943	831	72.12	..	..	7.14	773	125	7.03	....	123	16.5	.89	.29	..	6.2	.44	.25	15.4
NORTHWESTERN REGION:																			
Chicago & North Western	1944	997	58.37	...	..	5.67	929	123	9.81	....	123	19.6	1.32	.27	..	..	.44	..	19.2
	1943	1,027	60.72	...	..	5.05	967	122	10.21	....	123	20.1	1.34	.26	..	..	.45	..	19.5
Chicago Great Western	1944	930	....	...	7.1	5.07	780	125	8.55	....	125	18.1	1.25	..	..	..	.51	..	16.6
	1943	954	79.31	...	6.2	6.07	797	122	8.89	....	122	18.6	1.63	..	..	..	.53	..	17.1
Chicago, Milwaukee, St. Paul & Pacific	1944	817	39.52	112	..	5.67	737	114	11.81	31.35	120	16.8	1.07	.22	3.7	..	.43	..	16.7
	1943	842	43.69	110	..	5.47	763	115	10.51	31.95	122	17.5	1.07	.22	3.8	..	.44	..	17.3
Chicago, St. Paul, Minneapolis & Omaha	1944	709	....	...	..	5.06	703	110	....	....	111	16.8	..	.28	..	..	.45	..	16.9
	1943	687	....	...	..	5.05	687	111	....	....	111	16.7	..	.28	..	..	.42	..	16.9
Duluth, Missabe & Iron Range	1944	879	....	...	..	....	881	..			62	35.2	..	..	..	..	..	..	35.2
	1943	916	....	...	..	....	918	63	....	....	63	32.8	..	..	..	..	..	..	32.9
Duluth, South Shore & Atlantic	1944	767	....	...	..	....	767	125			125	16.4	..	..	..	..	..	..	16.4
	1943	700	....	...	..	....	701	123			124	19.1	..	..	..	..	..	..	19.1
Duluth, Winnipeg & Pacific	1944	1,327	....	...	..	....	1,328	106			106	15.7	..	..	..	..	..	..	15.7
	1943	1,256	....	...	..	....	1,257	101	....	....	101	15.2	..	..	..	..	..	..	15.2
Great Northern	1944	1,013	65.25	...	..	6.99	743	91	6.48	32.09	98	13.6	.93	.36	4.4	..	.41	.21	15.7
	1943	962	66.13	...	..	6.84	744	88	6.56	32.61	98	15.1	.96	.36	4.5	..	.41	.19	16.3
Green Bay & Western	1944	762	....	...	..	5.74	646	94			94	....	..	..	..	..	..	..	....
	1943	782	....	...	..	5.96	670	110	....	....	110	....	..	..	..	..	..	..	....
Lake Superior & Ishpeming	1944	828	....	...	..	....	830	127			128	....	..	..	..	..	..	..	....
	1943	735	....	...	..	....	760	128			129	....	..	..	..	..	..	..	....
Minneapolis & St. Louis	1944	999	....	...	..	7.59	1,010	132			134	9.3	..	.50	..	..	.41	..	27.0
	1943	999	....	...	..	7.50	1,000	130	....	....	131	11.8	..	..	..	..	.42	..	28.1
Minneapolis, St. Paul & Sault Ste. Marie	1944	692	....	...	..	6.22	655	93			94	16.3	..	..	..	..	..	..	16.3
	1943	691	....	...	..	6.18	652	95			96	15.4	..	..	..	..	..	..	15.5
Northern Pacific	1944	869	55.84	...	..	5.46	798	129	7.08	....	128	23.0	1.22	.64	..	..	.44	..	22.8
	1943	855	53.60	...	..	5.83	809	132	7.49	....	132	23.1	1.11	..	..	..	.43	..	22.8
Spokane International	1944	577	....	...	..	....	577	108	....	....	109	13.3	..	..	..	..	..	..	13.5
	1943	584	....	...	..	....	584	105	....	....	105	13.5	..	..	..	..	..	..	13.6
Spokane, Portland & Seattle	1944	...	56.14	51	..	5.66	235	324	7.31	28.06	90	...	.91	..	..	..	..	..	10.9
	1943	...	54.81	78	..	5.82	381	356	7.74	33.13	97	...	.97	..	..	..	..	..	11.5
TOTAL NORTHWESTERN REGION	1944	883	57.74	85	7.1	6.02	781	113	7.18	31.36	113	19.1	.97	.27	3.8	..	.44	.21	18.1
	1943	893	58.18	99	6.2	5.98	802	113	7.30	32.05	114	19.5	1.00	.26	3.9	..	.44	.19	18.5
CENTRAL WESTERN REGION:																			
Alton	1944	927	....	...	..	4.83	842	125	....	....	125	18.4	..	.19	..	..	.39	..	16.8
	1943	918	....	...	..	....	920	123	....	....	123	18.7	..	.23	..	..	.37	..	18.3
Atchison, Topeka & Santa Fe	1944	723	60.21	...	..	5.80	700	116	7.94	....	113	16.0	.95	.27	..	..	.59	..	14.3
	1943	727	59.74	...	..	6.26	752	110	8.51	....	118	16.5	.95	.27	..	..	.59	..	14.3
Chicago, Burlington & Quincy	1944	946	78.22	...	5.9	6.23	781	112	7.38	....	113	14.5	1.22	.23	..	..	.45	.14	16.4
	1943	909	63.47	...	5.8	6.11	792	104	7.40	....	104	17.3	1.34	.21	..	..	.48	.17	18.3
Chicago, Rock Island & Pacific	1944	952	79.54	..	4.7	5.57	846	132	8.48	..	113	18.6	1.01	.27	..	..	.53	.24	17.4
	1943	925	78.03	...	5.7	5.23	820	130	8.91	....	117	18.6	1.00	.28	..	..	.54	.26	17.6
Colorado & Southern	1944	531	65.45	..	..	..	556	167	96.78	..	168	17.3	1.43	.25	..	..	..	..	19.8
	1943	611	73.12	...	..	....	626	160	37.34	..	161	22.3	1.26	.25	..	..	..	..	20.6
Colorado & Wyoming	1944	756	....	....	..	6.45	482	269	....	....	248	....	..	..	..	..	..	..	....
	1943	679	....	...	..	7.38	643	278	....	....	279	....	..	..	..	..	..	..	....

Unit Fuel and Power Consumption of Locomotives and Rail Motor Cars—Railways of Class I in the United States (Excluding Switching and Terminal Companies) Calendar Years 1944 and 1943

Unit Fuel and Power Consumption of Locomotives and Rail Motor Cars—Railways of Class I in the United States (Excluding Switching and Terminal Companies) Calendar Years 1944 and 1943

Road		Fuel and power consumed per yard-switching locomotive-hour						Fuel and power consumed per 1,000 gross ton-miles (includ. locos. and tenders)—road freight service				Fuel and power consumed per passenger-train car-mile—road passenger service						
		Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Gals. of gasoline (gasoline and gas electric locos.)	Gals. of Diesel fuel (Diesel locos.)	Equated lb. of fuel (all locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Kw.-hrs. (electric locos.)	Equated lb. of fuel (all road frt. locos.)	Lb. of coal (steam locos.)	Gals. of fuel oil (steam locos.)	Gals. of Diesel fuel (Diesel locos.)	Kw.-hrs. (electric locos.)	Kw.-hrs. (motor-car trains)	Gals. of gasoline (motor-car trains)	Gals. of Diesel fuel (motor-car trains)	Equated lb. of fuel (all road-pass. service)
Denver & Rio Grande Western	1944	871	....	...	..	5.52	669	182	....	....	170	22.0	..	.33	..	..	..	..	22.0
	1943	787	....	...	..	5.64	694	181	....	....	175	23.0	..	.34	..	..	..	..	23.0
Denver & Salt Lake	1944	1,436	....	...	..	...	1,436	284	....	....	284	38.1	..	..	..	..	..	..	38.1
	1943	1,629	....	...	..	...	1,629	268	....	....	268	39.8	..	..	..	..	..	..	39.8
Fort Worth & Denver City	1944	2,000	95.09	...	..	6.77	981	158	9.41	....	130	20.1	1.17	.23	..	..	.44	.13	19.1
	1943	...	99.14	...	..	6.74	964	108	9.68	....	132	18.5	1.24	.24	..	..	.45	.13	19.9
Northwestern Pacific	1944	...	54.03	...	..	...	643	...	10.25	....	122	...	1.23	..	..	..	..	..	14.6
	1943	...	54.05	...	..	...	643	...	10.38	....	124	...	1.42	..	..	..	..	..	16.9
Southern Pacific Co.-Pacific Lines	1944	1,005	48.88	...	..	4.88	420	131	8.43	....	102	13.0	.85	.26	..	..	.75	..	10.1
	1943	915	48.53	...	..	4.94	455	138	8.52	....	103	11.5	.90	.27	..	..	.67	..	10.6
Toledo, Peoria & Western	1944	1,032	....	...	..	...	1,032	115	....	....	115	...	..	..	..	..	..	..	...
	1943	1,043	....	...	..	...	1,043	118	....	....	118	...	..	..	..	..	..	..	...
Union Pacific	1944	740	54.13	...	..	6.38	716	118	10.67	....	125	15.6	1.09	.23	..	..	.20	..	15.0
	1943	733	52.97	...	..	6.63	667	118	10.55	....	124	16.5	1.15	.25	..	..	.21	..	15.8
Utah	1944	1,041	....	...	..	...	1,042	234	....	....	234	...	..	..	..	..	..	..	...
	1943	1,057	....	...	..	...	1,060	222	....	....	222	...	..	..	..	..	..	..	...
Western Pacific	1944	872	52.05	...	..	4.90	266	137	8.60	....	88	6.4	.74	.35	..	..	..	..	8.7
	1943	731	51.33	...	..	4.81	375	127	8.14	....	93	5.1	.74	.30	..	..	..	..	8.5
TOTAL CENTRAL WESTERN REGION	1944	831	55.54	...	8.0	5.64	655	124	8.55	....	116	16.3	.93	.25	..	..	.51	.19	14.2
	1943	816	54.81	...	8.8	5.69	671	121	8.78	....	117	17.5	.95	.25	..	..	.52	.21	14.8
SOUTHWESTERN REGION:																			
Burlington-Rock Island	1944	...	....	...	..	...	...	...	8.50	....	101	...	1.55	..	..	..	..	.13	8.7
	1943	...	....	...	..	...	...	...	9.08	....	108	...	1.57	..	..	..	..	.12	8.1
Gulf Coast Lines	1944	...	72.42	...	..	5.71	758	...	7.09	....	85	...	1.10	..	..	4.3	.17	..	12.9
	1943	...	73.60	27	..	4.78	797	...	7.05	34.96	84	...	1.15	..	5.4	5.6	.39	..	13.6
International-Great Northern	1944	...	81.26	...	..	6.39	768	...	9.38	....	112	...	1.16	..	..	..	..	..	13.8
	1943	...	81.46	...	..	6.28	805	...	9.46	....	113	...	1.22	..	..	..	..	..	14.6
Kansas City Southern	1944	991	73.73	...	..	7.90	949	139	8.45	....	111	19.0	1.20	.27	..	..	..	..	16.0
	1943	1,027	72.61	...	..	8.12	953	135	8.71	....	114	25.3	1.26	.27	..	..	..	..	16.8
Kansas, Oklahoma & Gulf	1944	649	....	...	..	...	649	131	....	....	131	41.1	..	..	..	..	.50	..	6.2
	1943	721	....	...	..	...	721	123	....	....	123	...	..	..	..	..	.55	..	6.1
Louisiana & Arkansas	1944	...	76.87	...	..	8.94	864	...	8.06	....	94	...	1.12	.20	..	..	..	..	12.9
	1943	...	76.57	...	..	9.71	873	...	8.16	....	97	...	1.20	.21	..	..	..	..	13.7
Midland Valley	1944	606	....	....	....	....	606	180	....	....	180	16.9	..	..	..	..	..	..	16.9
	1943	749	....	....	....	....	749	145	....	....	145	19.0	..	..	..	..	..	..	19.0
Missouri & Arkansas	1944	...	....	...	..	....	...	213	....	....	213	42.1	..	..	..	..	.36	..	36.6
	1943	...	....	...	..	....	...	205	....	....	205	35.4	..	..	..	..	.44	..	36.6
Missouri-Kansas-Texas Lines	1944	685	55.36	...	..	....	664	278	7.14	....	85	...	.87	..	..	..	.38	..	10.3
	1943	700	56.89	...	..	....	684	306	7.38	....	88	17.0	.92	..	..	..	.36	..	10.8
Missouri Pacific	1944	883	75.62	...	..	5.59	795	112	7.23	....	106	17.9	.98	.37	..	..	.38	.54	14.6
	1943	849	71.79	...	..	5.46	780	112	7.71	....	109	18.9	.99	.35	..	..	.42	.56	15.1
Oklahoma City-Ada-Atoka	1944	...	....	....	..	....	...	234	....	....	234	3.0	..	..	..	..	..	..	3.0
	1943	...	....	....	..	....	...	213	....	....	213	4.1	..	..	..	..	..	..	4.1
St. Louis-San Francisco	1944	764	49.97	...	..	6.73	714	146	9.60	....	134	10.7	1.09	..	..	..	.38	..	12.9
	1943	841	53.54	...	..	7.48	779	144	9.52	....	132	19.4	1.09	..	..	..	.39	..	13.3
St. Louis-San Francisco & Texas	1944	...	67.18	...	..	....	800	...	10.53	....	125	...	.86	..	..	..	.40	..	10.4
	1943	...	68.05	...	..	....	810	...	10.73	....	128	...	.90	..	..	..	.44	..	10.9
St. Louis Southwestern Lines	1944	998	79.92	...	..	6.38	993	282	6.76	....	81	...	1.14	..	..	..	.52	..	13.5
	1943	917	74.05	...	..	6.67	928	310	6.90	....	85	...	1.22	..	..	..	.50	..	14.3
Texas & New Orleans	1944	...	62.44	...	..	5.57	610	...	7.62	....	91	...	.77	..	..	..	.37	..	9.0
	1943	...	62.29	...	..	5.33	648	...	7.46	....	89	...	.78	..	..	..	.38	..	9.2
Texas & Pacific	1944	...	52.18	...	..	....	740	...	7.60	....	91	...	.91	..	..	..	..	..	10.8
	1943	...	61.93	...	..	....	737	...	8.00	....	95	...	.91	..	..	..	..	..	10.8
Texas Mexican	1944	...	79.74	...	..	8.59	258	...	....	....	20	...	..	..	..	..	..	..	...
	1943	...	79.79	...	..	7.39	194	...	....	....	20	...	..	..	..	..	..	..	...
TOTAL SOUTHWESTERN REGION	1944	853	64.38	...	..	6.25	750	124	7.69	....	102	17.4	.96	.31	..	4.3	.38	.17	12.3
	1943	849	64.65	27	..	6.18	764	122	8.80	34.96	104	19.1	.98	.30	5.4	5.6	.40	.16	12.7



How to Utilize Douglas Fir Plywood in Re-building a Standard 40-ft. Boxcar into a **Bay Window Caboose**

ANOTHER PLYWOOD DEVELOPMENT

Previous advertisements have presented suggested plans for rebuilding standard 40-foot box cars into a modern three-car camp train.* Detailed at the right are plans for the suggested development of a bay window caboose.

PLYWOOD—AN IDEAL MATERIAL

Douglas fir plywood is an ideal material for such application. It is strong, rigid, light in weight—proven suitable for the most rigorous service by years of use in box cars, reefers, coaches and troop sleepers. Plywood panels go up quickly, reduce seams and cracks, are easily worked either by hand or power tools. They provide a smooth, easy-to-clean surface . . . make possible cars that are simpler to heat and more draft-free.

ENGINEERING HELP AVAILABLE

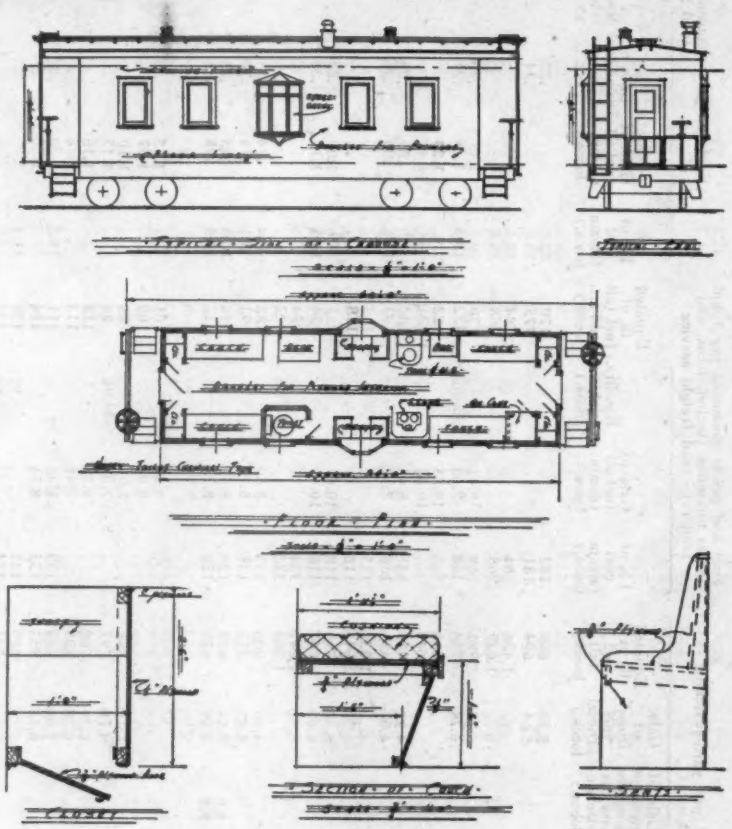
Douglas Fir Plywood Association engineers will be glad to work with you in developing such a unit. Write or wire today.

*Reprints available on request.

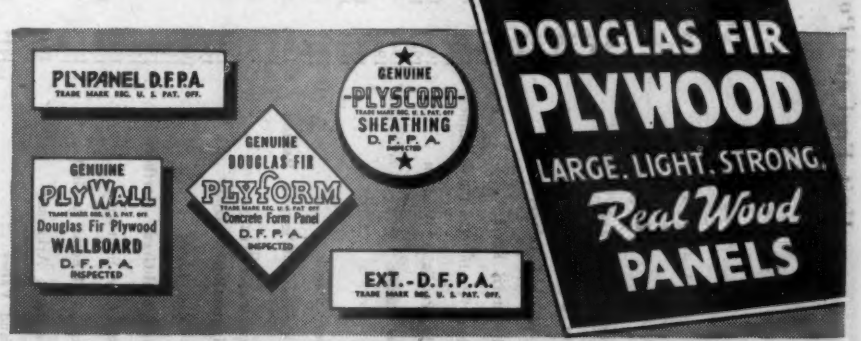
Douglas fir plywood is now available only on highest priorities. Application for allocation must be made by suppliers to the War Production Boards.

DOUGLAS FIR PLYWOOD ASSOCIATION

Tacoma 2, Washington



SUGGESTED DEVELOPMENT OF A BAY WINDOW CABOOSE by REBUILDING STANDARD 40FT. BOXCAR


PLYPANEL D.F.P.A.
TRADE MARK REG. U. S. PAT. OFF.
GENUINE PLYSCORD SHEATHING D. F. P. A. INSPECTED
GENUINE PLYWALL Douglas Fir Plywood WALLBOARD D. F. P. A. INSPECTED
GENUINE DOUGLAS FIR PLYFORM Concrete Form Panel D. F. P. A. INSPECTED
EXT.-D.F.P.A.
TRADE MARK REG. U. S. PAT. OFF.
DOUGLAS FIR PLYWOOD
LARGE. LIGHT. STRONG.
Real Wood PANELS

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

Used in the

MOST ADVANCED STEAM LOCOMOTIVES

of every period . . .

Pittsburgh
BOILER TUBES

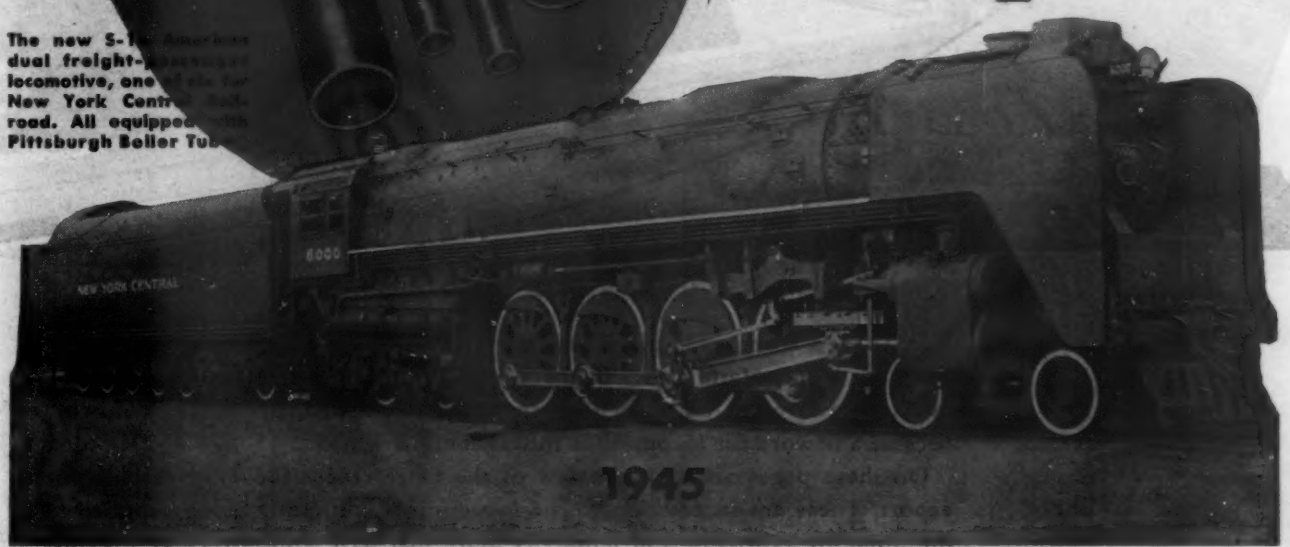
The complete dependability which has characterized *Pittsburgh* Boiler Tubes for 42 years, fully qualifies them for service in the great new *American* built, dual-purpose locomotive, "The Niagara." First of a number of such giants of the rails built for *New York Central* to handle both fast passenger and freight, approximately *4700* feet of *Pittsburgh Seamless* tubes her tremendous boiler.

Pittsburgh Seamless has helped advance the progress of *transportation* not alone in boiler tubes used in the railroad and marine field but in varied and equally important applications in the automotive and aviation industries. From the successful A.R.A. approved Tubular Railway Axle to the selection of Boiler Tubes for this advanced steam locomotive, confidence in the integrity of *Pittsburgh Seamless* is based on demonstrated superior quality.

PITTSBURGH STEEL COMPANY

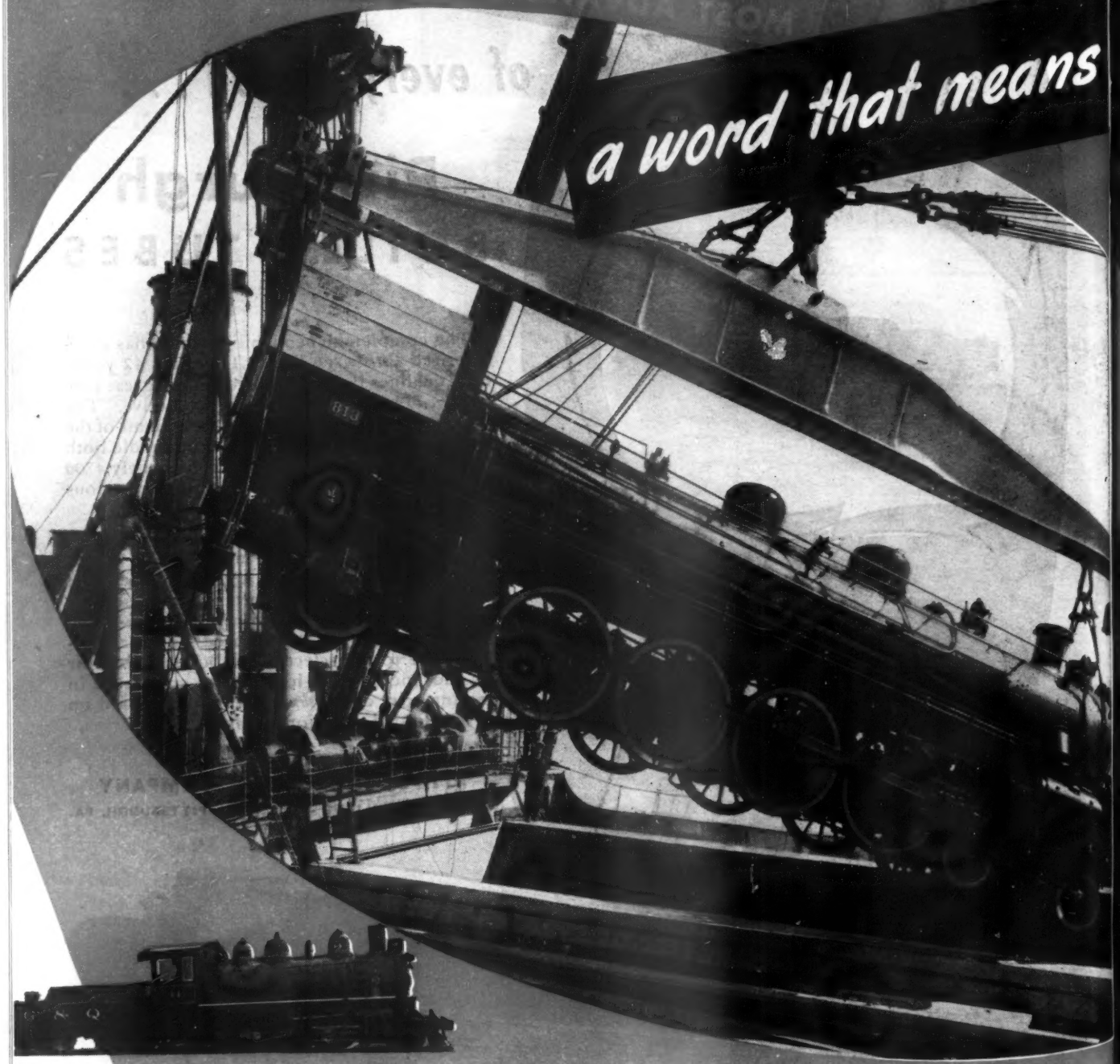
1459 GRANT BUILDING — PITTSBURGH, PA.

The new S-1 ... dual freight-... locomotive, one ... New York Centr... road. All equipped ... Pittsburgh Boiler Tub...



"BALDWIN"

a word that means fi



ECUADOR

In 1838, a scant seven years after the founding of the locomotive works that bears his name, Matthias W. Baldwin entered the export business by shipping two locomotives to Cuba. In the century that followed, the name "Baldwin" became a byword for locomotives throughout the world.

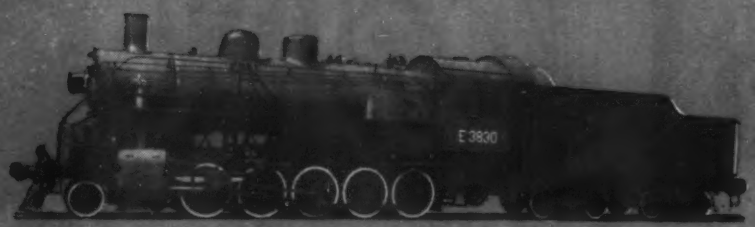
On these pages are shown a few of the more recent locomotives built for export. These are in addition to the locomotives constantly being supplied to the domestic railroads, and hundreds more that have gone overseas with the U. S. Army.

...fine locomotives in any language...

INDIA

COLOMBIA

BOLIVIA



RUSSIA

BRAZIL

ARMY NAVY

BLW THE BALDWIN GROUP

BALDWIN

LOCOMOTIVES

The Baldwin Locomotive Works, Philadelphia 42, Pa., U. S. A. Offices: Philadelphia, New York, Chicago, St. Louis, Washington, San Francisco, Boston, Cleveland, Pittsburgh, Detroit, Houston.

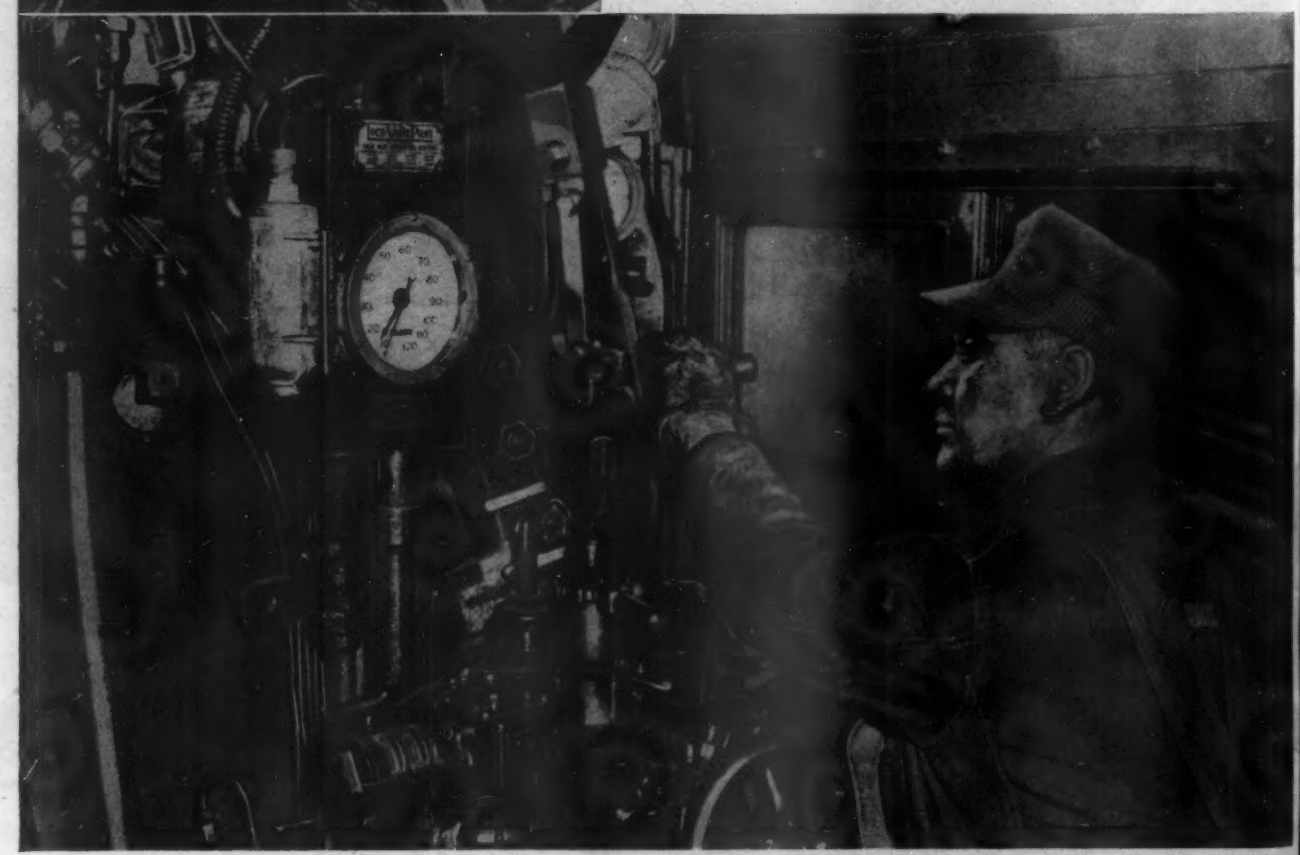
Then *and* Now

This cab view of a wood burner with the signal bell rope overhead, pictures the simplicity of locomotive operation in 1867.

How different from its powerful modern successor of 1945!

Rule of thumb has no place on such power!

The Valve Pilot is the answer.



VALVE PILOT CORPORATION

230 Park Avenue, New York 17, N. Y.

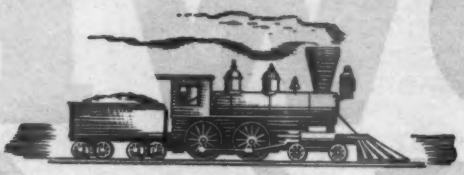
Tomorrow's
POWER
Today!

It's the Opposed-Piston Diesel Locomotive by

FAIRBANKS-MORSE

A name worth remembering

Beginning the Second Hundred Years



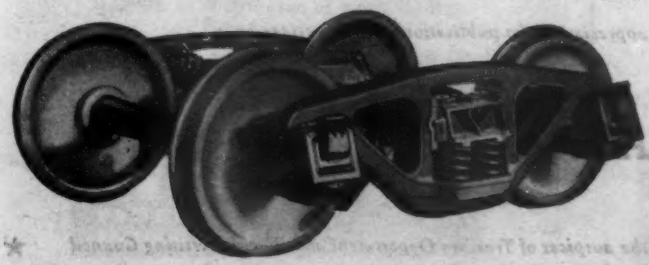
The General Assembly of Tennessee on December 11, 1845, chartered this Company by Special Legislative Act . . . We are still operating under this ancient charter . . . We have never been in receivership—we have never been reorganized—we have never defaulted upon, failed to pay nor sought to compromise a fixed obligation . . . We gave the public fair and honorable service the first hundred years, and we propose to give more and finer service in the future . . . As a beginning we have just started the colossal task of reducing curves and grades from Memphis, Tennessee, to Atlanta, Georgia. This work will take about four years to complete and will cost approximately $2,600,000.00 . . . The idea was conceived by our own people and the work will be done by men living in the territory we are privileged to serve. This will eventually mean heavier and faster trains, at greater speeds, with greater safety . . . Thus we will have more jobs for our own magnificent forces and for our returning soldiers . . . We love America and the American way of life. We love the South and all it stands for and has stood for . . . We plan and hope and expect to be the best public servant ever chartered under the laws of Tennessee.

THE NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY

The A.S.F. Ride-Control Truck (A-3) provides an easy ride, is safe, requires minimum maintenance—and yet is within the cost and weight range of the conventional freight-car truck.

MINT-MARK OF ⬡ FINE CAST STEEL

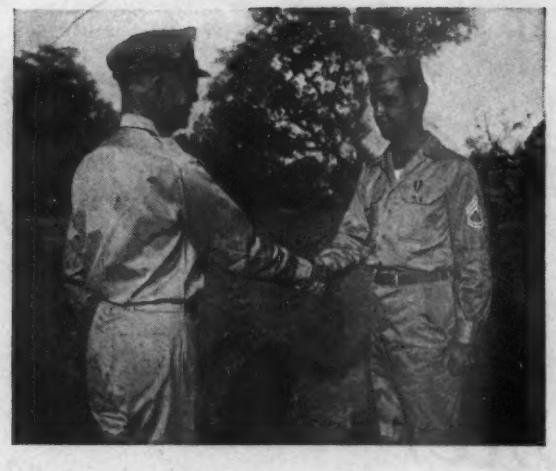
A·S·F *Ride-Control* TRUCK



LONG SPRING TRAVEL · CONSTANT FRICTION CONTROL

AMERICAN STEEL FOUNDRIES

CHICAGO



The Pace of Victory Permits Only A Congratulatory Handshake!

American Industry well merits a decoration for its brilliant record in the Mighty 7th! But, as our newly decorated Pacific heroes quickly return to combat, so industrial leaders aren't resting on their laurels. ***Back into Bond action***—they are now busy consolidating recent Payroll Savings Plan gains!

First, many executives are now patriotically working to retain the substantial number of new names recently enrolled during the 7th War Loan. By selective resolicitation, they are urging all new subscribers to maintain Bond buying allotments.

Second, many are also employing selective resolicitation to urge every worker who increased his or her subscription in the 7th to continue on this wise, saving-more-for-the-future basis.

Help to curb inflationary pressures and harvest peacetime prosperity by holding the number of Payroll Savings Plan subscribers—and amounts of individual subscriptions—to the mark set in the Mighty 7th!

The Treasury Department acknowledges with appreciation the publication of this message by

RAILWAY AGE

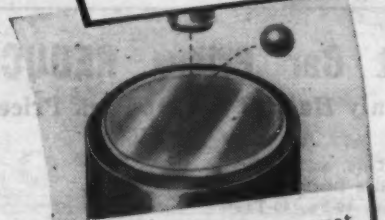
★ *This is an official U. S. Treasury advertisement prepared under the auspices of Treasury Department and War Advertising Council* ★

Willson Safety Spectacles

20 SIZES

So You Can Fit Anybody!

Why 20 sizes? Because it takes that many to fit every type of face accurately. And, above all, *comfortably*. Result—workers keep them on. Injury rates come down. Efficiency goes up.



Every Willson lens must pass most rigid tests. Federal drop-ball test for impact resistance. Polariscope test for uniform heat treatment. That's why we call them SUPER-TOUGH*!

Protection's not complete unless sides are considered, too. Style AS, with sideshields, provides all-over eye safety. For frontal protection only, use Style A, without sideshields.

For help on your eye-protection problems, see your Willson Distributor or write to Dept. RA-11.

*T. M. Reg. U. S. Pat. Off.

GOGGLES · RESPIRATORS · GAS MASKS · HELMETS

DOUBLE WILLSON PRODUCTS INCORPORATED

READING, PA., U. S. A. Established 1870

Also makers of world famous Willsonite sunglasses

This may be your new

ELECTRICAL TESTING DEPARTMENT

THE section of the testing department shown is one of the most important divisions at Unionair, now producing electrical assemblies solely for wartime use.

The units shown have been approved by the Inspection Department and are being subjected to sustained electrical tests as their final test prior to shipment.

This department may be yours, soon we hope, when we can put its knowledge to work on making electrical assemblies to your specifications.

Our new booklet titled, "Electrical Assemblies made to Customers' Specifications" is available on request. Write to: Union Aircraft Products Corp., Dept. RA, 245 East 23rd Street, New York 10, N.Y.

UNIONAIR

Electrical Assemblies—Hydraulic Fittings
Conduit Fittings—Junction Boxes

UNION AIRCRAFT PRODUCTS CORP., NEW YORK

GET TOGETHER DEPARTMENT

Educational Services
for
RAILROAD MEN

Our New Service
on
Diesel Locomotive
Operation
is highly recommended
for
Engineers and Firemen

The Railway Educational Bureau
Omaha 2, Nebraska

GET OUR PRICES FIRST

RAILWAY EQUIPMENT
and ACCESSORIES

We can furnish rails, spikes, bolts, angle bars, cranes and other railway material. Machines, motors, pumps, etc.
Write, wire or phone inquiries

Sonken - Galamba Corp.
Kansas City 18, Kans.

LOCOMOTIVES

Please note the following locomotives are practically all offered in rebuilt condition.

Consolidations

110 ton Americans. Cyls. 24x30". New 1913-1916. Pressure 200#. Tractive effort 48,200#. Will completely rebuild and put in A1 condition.

114 ton Americans. Cyls. 23x30". Completely rebuilt 1929. 210# pressure. Tractive effort 50,600#. In exceptionally fine condition. Immediate delivery.

Mikados

181 ton Americans. Cyls. 28x32". New 1924. 200# pressure. Tractive effort 67,700#. (plus 11,500# for boosters). Total tractive effort 79,200#. Will rebuild for quick delivery.

Santa Fe's

189 ton Americans. Cyls. 29x32". New 1920. 190# pressure. Tractive effort 71,300#. Will rebuild for quick delivery.

Type 2-8-4

203 ton Limas. Cyls. 27½x30". New 1928. Pressure 240#. Tractive effort 66,550#. (plus 12,000# for boosters). Total tractive effort 78,550#. Completely rebuilt. Immediate delivery.

Type 0-6-0

80 ton Baldwin switcher, with tender. Cyls. 21x26. Tractive effort 34,400#. New December 1925. Will furnish with new ICC cards. This locomotive only comparable to new engine.

WRITE WIRE PHONE
THOMAS F. CAREY CO., Inc.
120 LIBERTY STREET, NEW YORK 6, N. Y.
Telephone Barclay 7-1770

RELAYING RAILS

12#—exceptionally good quality — RAILROAD TIE PLATES for all size rails. All in good condition. For complete details, contact
SONKEN-GALAMBA CORP.
Kansas City 18, Kans.

POSITIONS OPEN

DESIGNING ENGINEERS and DRAFTSMEN wanted for post-war work. Familiarity with railroad equipment and steel casting design desirable. Give age, outline of training and experience, salary expected and when available in reply. ADDRESS BOX 750, RAILWAY AGE, 30 CHURCH STREET, NEW YORK 7, N. Y.

FOR SALE

Nordberg track shifter, excellent. Six 12 yard western side dump cars, one 4 yard western end dump car fair. Ingalls Stone Co., Bedford, Ind.

Freight Car Prices REDUCED!

Now Only Half of Recent Peak Prices—
As Low As $500

7, Hopper, Twin, 50-Ton
50, Hopper, Side Discharge, 50-Ton
10, Refrigerator, 40-Ft., 40-Ton
10, Box, 40-Ft., 40-Ton
7, Box, Automobile, Steel, 50-Ft., 50-Ton
2, Dump, Western, Automatic, 30-Yd., 50-Ton; Lift Doors
2, Dump, Clark, Automatic, 30-Yd., 50 Ton; Drop Door
2, Dump, Western, 20-Yd., 40-Ton; Steel Floors
4, Dump, K & J Automatic, Lift Door; 37-Yd., 50-Ton
20, Dump, Koppel, Automatic, 20-Yd., 40-Ton; Lift Doors
12, Dump, K & J Automatic Lift Door; 20-Yd., 50-Ton
2, Dump, K & J, Lift Door, 37-Yd., 50-Ton
2, Tank, 8000-Gallon, 40-Ton Trucks
5, Tank, 10,000-Gallon, 50-Ton Trucks

All cars are priced to sell!

IRON & STEEL PRODUCTS, INC.
40 years' experience
13486 S. Brainard Ave. **Chicago 33, Illinois**
"ANYTHING containing IRON or STEEL"

Robert W. Hunt Company
ENGINEERS

Inspection—Tests—Consultation
All Railway Equipment
Structures and Materials
General Office:
175 W. Jackson Boulevard
CHICAGO
New York-Pittsburgh-St. Louis

HELP WANTED

Designers and Checkers for Railroad Freight Cars. Location New York Area. All replies strictly confidential. W.M.C. Rules followed. Address Box 751, RAILWAY AGE, 30 Church Street, New York 7, N. Y.

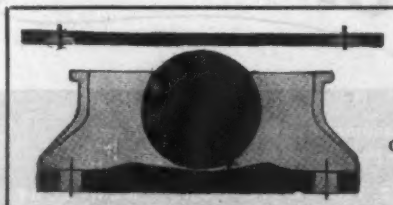
RAILROAD EQUIPMENT
CARS — LOCOMOTIVES
REPAIR PARTS

RELAYING RAILS

STEEL STORAGE TANKS
6000 — 8000 — 10000 gal. cap.
CLEANED AND TESTED

THE PURDY COMPANY
122 S. Michigan Avenue Chicago 3, Illinois

BUY WAR BONDS



STUCKI SIDE BEARINGS
Manufactured by
A. Stucki Co.
Oliver Bldg., Pittsburgh, Pa.
Canadian Representatives
The Holden Co., Ltd.
Montreal, Can.

This announcement is not an offer to sell or a solicitation of an offer to buy these securities. The offering is made only by the Offering Circular.

$39,000,000

The Texas and Pacific Railway Company

General and Refunding Mortgage 3⅞% Bonds, Series E

Dated July 1, 1945 — Due July 1, 1985

The issuance and sale of these Bonds are subject to authorization by the Interstate Commerce Commission

Price 100½% and accrued interest

The Offering Circular may be obtained in any State in which this announcement is circulated from only such of the undersigned and other dealers as may lawfully offer these securities in such State.

HALSEY, STUART & CO. INC.

BEAR, STEARNS & CO. — LADENBURG, THALMANN & CO. — OTIS & CO. (INCORPORATED)

WERTHEIM & CO. — SCHOELLKOPF, HUTTON & POMEROY, INC. — SHIELDS & COMPANY

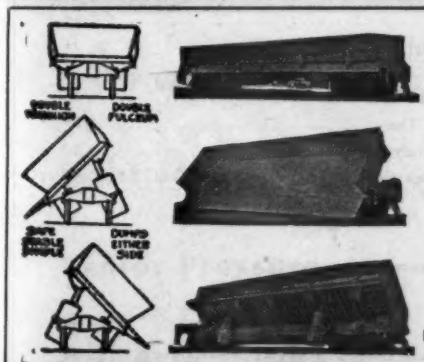
H. M. BYLLESBY AND COMPANY (INCORPORATED) — PAINE, WEBBER, JACKSON & CURTIS

BURR & COMPANY, INC. — CENTRAL REPUBLIC COMPANY (INCORPORATED) — DEMPSEY & COMPANY

BAKER, WEEKS & HARDEN — GRANBERY, MARACHE & LORD — GREGORY & SON INCORPORATED

HARRIS, HALL & COMPANY (INCORPORATED) — E. M. NEWTON & COMPANY

July 12, 1945.



AIR DUMP CARS

RAIL CARS
MINE CARS
AND
LOCOMOTIVES
AXLESS TRAINS

COMPLETE HAULAGE SYSTEMS

DIFFERENTIAL STEEL CAR CO.
FINDLAY, OHIO

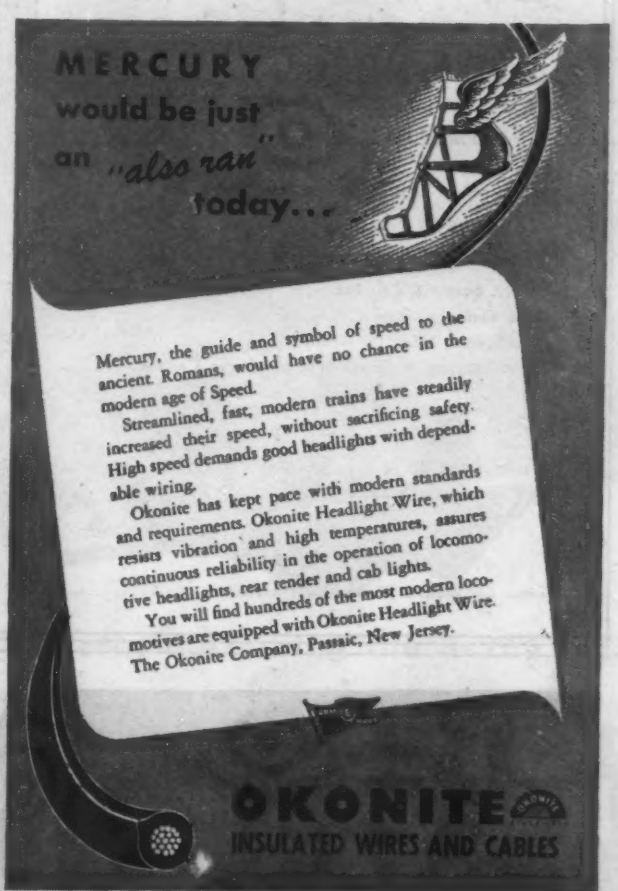
DULIEN BUYS — DULIEN SELLS — DULIEN LIQUIDATES
RAILROAD EQUIPMENT & ACCESSORIES

Available for IMMEDIATE DELIVERY

3 American Saddle Tank Locomotives
1—94 Ton SUPERHEATED 1—84 Ton
1—83 Ton

Subject to Prior Sale

DULIEN STEEL PRODUCTS, Inc.
OF WASHINGTON
1008 Western Ave.
SEATTLE 4, WASH.
OF NEW YORK
2280 Woolworth Bldg.
NEW YORK 7, N. Y.


MERCURY
would be just
an "also ran"
today...
Mercury, the guide and symbol of speed to the ancient Romans, would have no chance in the modern age of Speed.
Streamlined, fast, modern trains have steadily increased their speed, without sacrificing safety. High speed demands good headlights with dependable wiring.
Okonite has kept pace with modern standards and requirements. Okonite Headlight Wire, which resists vibration and high temperatures, assures continuous reliability in the operation of locomotive headlights, rear tender and cab lights.
You will find hundreds of the most modern locomotives are equipped with Okonite Headlight Wire.
The Okonite Company, Passaic, New Jersey.
OKONITE
INSULATED WIRES AND CABLES

Index to Advertisers

July 21, 1945

A

American Arch Company, Inc. 28
American Locker Company, Inc. 20
American Locomotive Company 6, 7
American Steel Foundries 43

B

Baldwin Locomotive Works, The 38, 39
Bethlehem Steel Company 3
Budd Manufacturing Co., Edward G. 10, 11
Byers Co., A. M. ..... Front Cover

C

Carey Co., Inc., Thomas F. 46
Classified Advertisements 46

D

Differential Steel Car Company 47
Douglas Fir Plywood Association 36
Dulien Steel Products, Inc. 47

E

Edgewater Steel Company 14, 15
Electro-Motive Division, General Motors Corporation 30, 31

F

Fairbanks, Morse & Co. 41

G

General Electric Company 6, 7
General Railway Signal Company ..... Back Cover
Get Together Department 46

H

Halsey, Stuart & Co., Inc. 47
Hunt Company, Robert W. 46
Hunt-Spiller Mfg. Corporation 33
Hyatt Bearing Division, General Motors Corporation 22

I

Ingalls Stone Co. 46
Iron and Steel Products, Inc. 46

L

Lima Locomotive Works, Incorporated 27

M

Mt. Vernon Car Mfg. Co., Division of H. K. Porter Company, Inc. 4, 5

N

Nashville, Chattanooga & St. Louis Railway, The 42
National Lead Company 26

O

Ohio Locomotive Crane Co., The 46
Okonite Company, The 47

P

Pittsburgh Steel Company 37
Purdy Company, The 46
Pyle-National Company, The 17

R

Railway Educational Bureau, The 46
Republic Steel Corporation 16
Ryerson & Son, Inc., Joseph T. 48

S

Schaefer Equipment Company 19
Sonken-Galamba Corp. 46
Streeter-Amet Company 13
Stuki Co., A. 46
Sturtevant Company, B. F. 18
Superheater Company, The 29
Superior Railway Products Corp. 12
Symington-Gould Corporation, The 49

T

Timber Structures, Incorporated 21

U

Union Aircraft Products Corp. 45
Union Switch & Signal Company 24, 34, 35
Unit Truck Corporation 2

V

Valve Pilot Corporation 40

W

Westinghouse Air Brake Company 32
Westinghouse Electric Corporation 8, 9
Willson Products, Incorporated 45

STEEL *in stock at* **RYERSON**

• Ryerson has the steel you need ready for immediate shipment. Ten convenient Ryerson plants stock more than ten thousand kinds, shapes and sizes of steel and allied products. Joseph T. Ryerson & Son, Inc. Plants at: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City

Principal Products Include:

Structurals	Strip	Stainless	Babbitt, Solder
Stay Bolt Iron	Alloys	Mechanical Tubing	Reinforcing
Plates	Cold Finished Steel	Boiler Tubes	Nails, Rivets, etc.
Sheets	Tool Steel	Welding Rod	Machinery

A NEW, IMPROVED LID...

The Symington

COMPOSITE ARTICULATED

JOURNAL BOX LID

FEATURES

- ★ Light weight—yet sturdy
- ★ Tight Joint
- ★ Center Pressure
- ★ Full Articulation
- ★ Easy to apply and remove

For full details send for Bulletin describing the B-265 Lid.

THE SYMINGTON-GOULD CORPORATION

Works ROCHESTER & DEPEW, NEW YORK

New York • Chicago • St. Louis • Baltimore • Boston • San Francisco • *In Canada* ADANAC SUPPLIES, LTD., Montreal, Que.

WHEN THE *Speed* FACTOR PRESENTS A SIGNALING PROBLEM

Install G-R-S Automatic Block Signals!

The addition of modern powered "high-speed" trains presents an operating problem that requires some form of re-signaling. To provide adequate braking distances for these high speeds would require longer blocks, but longer blocks would naturally impair the operating efficiency of regular trains.

Therefore, when one or more high-speed trains are operated over a division on which the majority of trains operate at regular or low speeds, the signals must provide the most advantageous spacing for following or opposing trains to insure safety, increase track capacity and provide efficient operation regardless of the speed variations.

3- and 4-block, 4- and 5-indication signaling provides a logical solution to this problem. Where speed variations are not too extreme, 2-block 3-indication signaling will be sufficient.

G-R-S engineers have the "know-how" to give you valuable assistance in predetermining which automatic block signaling arrangement will best meet your particular requirements. It is easy to take advantage of this "know-how"!

GENERAL RAILWAY SIGNAL COMPANY

New York Chicago Rochester 2, N.Y. St. Louis A-2068